# **RESPECT** — The Data: A Closer Look

by

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Kathie Hilbert Connersville High School Connersville, Indiana

# CDC's 2007 Science Ambassador Program

This lesson is designed as a real-life application of the scientific method. It is appropriate for any high school science class. Students should have prior knowledge of the basics of the scientific method before beginning this lesson. Students will use their knowledge of the scientific method to analyze and evaluate data about teen dating violence. At the conclusion of the lesson, students will be asked to draw conclusions from the scientific process that could guide behavioral modifications to prevent teen dating violence. The authors recognize the sensitivity of the sample data discussed in this lesson. Teen dating violence and the behaviors that could lead to violence might be too sensitive for some younger students. School policies should be reviewed before using this lesson. Students need to be familiar with basic scientific investigation before proceeding.

Disclaimer: The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

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# **Summary**

This lesson is designed as a real-life application of the scientific method. It is appropriate for any high school science class. Students should have prior knowledge of the basics of the scientific method before beginning this lesson. Students will use their knowledge of the scientific method to analyze and evaluate data about teen dating violence. At the conclusion of the lesson, students will be asked to draw conclusions from the scientific process that could guide behavioral modifications to prevent teen dating violence. The authors recognize the sensitivity of the sample data discussed in this lesson. Teen dating violence and the behaviors that could lead to violence might be too sensitive for some younger students. School policies should be reviewed before using this lesson. Students need to be familiar with basic scientific investigation before proceeding.

# **Learning Outcomes**

- Students will be able to apply knowledge of scientific methods to collect and analyze data.
- Students will be able to evaluate selected sources of data.
- Students will be able to identify sources of bias within the data.
- Students will be able to develop a survey to answer a hypothesis.
- Students will be able to identify unhealthy and healthy relationship behaviors.
- Students will be able to apply knowledge gained from scientific inquiry to guide prevention of teen dating violence.

#### Materials

- 1. Photocopies of Scientific Method Review Quiz one per student
- 2. Photocopy of Scientific Method Review Quiz Answer Key teacher reference only
- 3. Photocopy of Sample Dialog teacher reference only
- 4. Photocopy of Scientific Method Worksheet Answer Key teacher reference only
- 5. Photocopy of Survey Question Examples teacher reference only
- 6. Photocopies of Scientific Method Worksheet one per student
- 7. Photocopies of Scientific Method Scoring Rubric one per student
- 8. Photocopy of Teacher Information Sheet teacher reference only
- 9. Photocopy of Scenarios Worksheet one per class
- 10. Activity supplies for class- graph paper, colored pencils, rulers
- 11. Transparency film and overhead pen one per student group
- 12. Overhead projector
- 13. Internet access

## **Total Duration**

3 hours

## **Procedures**

# **Teacher Preparation**

Dating violence may be an unfamiliar topic for many teachers. The Centers for Disease Control and Prevention (CDC) developed Choose Respect, a national initiative that provides information and materials on teen dating violence for students and adults. The teacher should become familiar with facts about dating abuse risk factors and warning signs prior to the lesson. A brief overview is included for the teacher's use, but it is highly recommended the teacher become familiar with the basic information on the Choose Respect website before proceeding with the lesson.

The teacher should prepare photocopies of handouts. One copy per student will need to be made of the following:

- Introduction Scientific Method Review Quiz
- Step 2 Scientific Method Worksheet
- Scientific Method Scoring Rubric

One class copy of the Step 6 — Scenarios Worksheet should also be made.

The teacher will also need to prepare copies of the following for teacher use only:

- Introduction Scientific Method Review Quiz Answer Key and Sample Dialog
- Step 2 -Scientific Method Worksheet Answer Key
- Step 3 Survey Question Examples

Understanding survey development is an essential part of this lesson. Teachers unfamiliar with survey construction may want to read an overview of this subject. A web resource is listed below.

The teacher should prepare the scenario questions by cutting the scenario worksheet into strips, so that each group of students will receive one scenario.

The teacher must also enlist the aid of a staff member or other adult for the mock interaction in the introduction.

#### Web Resource

Title: Survey Tips: How to Write a Good Survey Questionnaire

URL: http://www.accesscable.net/~infopoll/tips.htm

Description: This website provides basic information on how to write a good survey.

Title: Choose Respect

URL: http://www.chooserespect.org

Description: This CDC website contains information on the Choose Respect program a teen-dating,

violence-prevention initiative.

#### **Supplemental Documents**

Title: Teacher information sheet—Dating Abuse Overview

Description: This document provides a brief introduction to the problem of dating abuse among teens. It is meant to familiarize the teacher with some of the basic facts about risk factors and warning signs. It is also an introduction to the Choose Respect initiative and website.

# Introduction

# Step 1 (Duration: 15 minutes)

# Scientific Method Step One: Stating the Problem or Question

The teacher should introduce the lesson by administering the Scientific Method Review Test as a pretest for this lesson. As students are finishing the pretest, a prearranged mock interaction with another teacher or staff member will occur. The purpose of this interaction is to make the students uncomfortable as they witness the modeling of a disrespectful exchange. It is important that the tone of one participant be demanding and disrespectful. Content of the dialog is up to the teacher. As an example, the teacher can consult the sample dialog supplemental document.

Following the mock exchange, the teacher should discuss the observed interaction with the class by asking questions such as

- "How did that make you feel?"
- "What would you have done if someone talked to you like that?"
- "Have you ever seen kids here at the school treat each other disrespectfully?"
- "Have you ever seen dating couples disrespect each other?"
- "Do you think it happens in other schools?"

After engaging the students in this discussion, the teacher should introduce the topic of teen dating violence.

## **Supplemental Documents**

Title: Scientific Method Review Quiz

Description: This document can be used to assess students' knowledge of the scientific method. This can serve as a pretest for this lesson. However, students should have knowledge of the scientific method before beginning this lesson.

Title: Scientific Method Review Quiz Key

Description: This document can be used to assess the Review Test.

Title: Sample Dialog

Description: This document contains an example of a disrespectful exchange between two adults. The teacher is encouraged to modify the content to suit the situation.

#### Step 2 (Duration: 30 minutes)

# Scientific Method Step Two: Forming a Hypothesis

After surveying students' ideas about teen dating violence, the question should be asked, "How does teen dating violence in this state compare to teen dating violence across the United States?"

The teacher should distribute the Scientific Method Instruction Sheet to each student. Students should be directed to begin thinking about how they would answer this question using scientific data. Students should complete the

- Question
- Hypothesis
- Experiment

part of this handout. The teacher should guide the students, so that they arrive at the fact that some type of survey will be needed as a test to obtain data for this investigation.

As an assignment, have each student develop a survey question they think would be appropriate to ask to collect data about the frequency of teen dating violence in their state.

# Supplemental Document

Title: Scientific Method Worksheet

Description: This document is a worksheet for students to design a scientific experiment to answer the question, "How does teen dating violence in this state compare to teen dating violence across the United States?"

## Step 3 (Duration: 45 minutes)

# Scientific Method Step Three: Designing and Conducting an Experiment

The teacher will begin the class with a quick review of the problem and hypothesis discussed in the previous step.

The teacher should divide students into groups of three and instruct them to read and discuss their survey questions. The team should pick the question they think is best within each group. When finished, they are to write the question on a transparency film or blackboard. When all teams have made their selections, the teacher will guide the class through a verbal critique of the chosen questions. The teacher should encourage the students to look for bias in the questions, unclear wording, and vague terminology. At the completion of the lesson, the students may edit their questions and turn them in.

# Supplemental Document

Title: Survey Question Examples

Description: This document contains examples of acceptable and unacceptable survey questions. A brief explanation of elements to consider is included.

# Step 4 (Duration: 30 minutes)

# Scientific Method Step Four: Collecting Data

At the beginning of Step 4, review with the class the steps in the scientific method completed up until this point (stating the problem, forming a hypothesis, designing and conducting an experiment). Explain to the students that the next step in their investigation would be to distribute their survey statewide. Since this is a sensitive topic, the teacher should explain that their survey will not be used. However, students will be able to answer their hypothesis using information from CDC's Youth Risk Behavior Survey.

The teacher should provide students with copies of table ten and eleven of CDC's Morbidity and Mortality Report. Volume 57, Table 11 shows the national data for teen dating violence victimization. Table 12 shows the data for teen dating violence victimization for each individual state. The data in both of these tables includes percentages of males, females, and a total for teen dating violence frequency.

Note: The teacher should point out several points about the YRBS data. The percentages shown in these tables represent all students. The percentages would be higher if students who had not dated were taken out of the denominator. The YRBS is self reported data so it is possible that students who were victims did not report. The teacher may choice to ask students why someone would not be willing to report their experience. This discussion might help students further understand the strengths and weaknesses of survey data.

Instruct students to construct a data table comparing the percentage of people in the U.S. who have experienced teen dating violence with the percentages of people who have experienced teen dating violence in their state, along with three other states of their choice. Therefore, their data table should include five different data sets.

#### Web Resource

Title: Morbidity and Mortality Weekly Report, June 9, 2006

URL: http://www.cdc.gov/mmwr/PDF/SS/SS5505.pdf

Description: This website provides the results of the 2005 Youth Risk Behavior Surveillance. Table 10 shows the national data for teen dating violence. Table 11 shows the data for teen dating violence for each individual state. The data in both of these tables includes percentages of males, females, and a total for teen dating violence frequency.

# Step 5 (Duration: 15 minutes)

Scientific Method Step Five: Analyzing the Data

After completing their data table, students will create a bar graph, comparing the national percentage of teens victimized by dating violence, their own state's percentage, and that of three additional states.

After completing the graph, students should finish the conclusion section of the Scientific Method worksheet. Students should turn in the Scientific Method worksheet, their data table, and their graph. So that students are aware of how they will be evaluated, the teacher should provide students with the Scientific Method Worksheet Scoring Rubric.

# **Supplemental Documents**

Title: Scientific Method Worksheet

Description: This document is a worksheet for students to design a scientific experiment to answer the question, "How does teen dating violence in this state compare to teen dating violence across the United States?"

Title: Scientific Method Worksheet Key

Description: This document will be used as a guide to help evaluate the answers that might be present on the Scientific Method worksheet.

Title: Scientific Method Worksheet Scoring Rubric

Description: This document will be used to score the Scientific Method Worksheet.

# Step 6 (Duration: 45 minutes)

## Scientific Method Step Six: Forming a Conclusion

After the Scientific Method worksheet has been turned in, discuss how teen dating violence is a real public health problem. Discuss ways the students can prevent dating violence in their own lives, as well as the lives of their friends. After some discussion, divide the students up into groups of 3-4 students. Hand out one of the Teen Dating Violence scenarios to each group of students. Give the students approximately 10 minutes to discuss what they would do to deal with the scenario — if it occurred in their lives. After students have discussed as a group, have each group read their scenario and present it to the class with an appropriate reaction. Teachers should discuss student responses and why they might or might not be appropriate.

#### Web Resource

Title: Choose Respect

URL: http://www.chooserespect.org/scripts/index.asp

Description: This website provides basic statistics, information, and resources related to teen dating

violence.

## **Supplemental Documents**

Title: Scenario Worksheet

Description: This document provides eight different scenarios of potentially violent situations in which teens might find themselves.

Title: Scenario Worksheet Answer Key

Description: This document suggests appropriate reactions to eight different scenarios of potentially violent situations in which teens might find themselves.

## **Conclusion (Duration: 45 minutes)**

## Using Scientific Information to Improve Student Health and Safety

To conclude this activity, have students create their own personal Dating Bill of Rights. Instruct students to list the types of behavior they deserve to receive from their dating partner.

After completing the Dating Bill of Rights, students may choose to sign and display them as a conclusion to this activity.

#### Web Resource

Title: Choose Respect: Dating Bill of Rights and Responsibilities URL: http://www.chooserespect.org/scripts/teens/rights.asp

Description: This website provides a sample of a personal Dating Bill of Rights. This will be helpful as the teacher is guiding students in developing their own Dating Bill of Rights.

#### **Assessment**

The students will be evaluated on the scientific method activity using the Scientific Method Worksheet Answer Key and Scientific Method Scoring Rubric from Step 5. They will also be evaluated informally from their class presentations of the Teen Dating Violence Scenarios using the Teen Dating Violence Scenarios Answer Key in the Conclusion.

# **Modifications**

#### **Extension**

This activity can be extended by instructing students to create a music video by playing the game using the Choose Respect website:

#### Web Resources

Title: Choose Respect—Game

URL: <a href="http://www.chooserespect.org/scripts/game/musicvideogame.asp">http://www.chooserespect.org/scripts/game/musicvideogame.asp</a>

Description: This website provides a game in which students must answer a series of questions about teen dating violence to be able to create their own music video. The game not only evaluates students' knowledge of teen dating violence, but also is a fun experience for students to be able to create a music video.

# **Education Standards**

#### **National Science Education Standards**

SCIENCE AS INQUIRY, CONTENT STANDARD A

As a result of activities in grades 9-12, all students should develop

- Abilities necessary to do scientific inquiry
- Understandings about scientific inquiry

# SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES, CONTENT STANDARD F

As a result of activities in grades 9-12, all students should develop understanding of

- Personal and community health
- Population growth
- Natural resources
- Environmental quality
- Natural and human-induced hazards
- Science and technology in local, national, and global challenges

# HISTORY AND NAURE OF SCIENCE, CONTENT STANDARD G:

As a result of activities in grades 9-12, all students should develop understanding of

- Science as a human endeavor
- Nature of scientific knowledge
- Historical perspectives

# Sample Dialog

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The following is a sample of dialog that could be used during the introduction of the lesson. The classroom teacher will be designated Subject 1 and the other participant will be Subject 2.

Subject 1 should be quietly waiting on the class to complete the pre-test.

Subject 2 should enter in an abrupt manner.

Subject 2: (spoken in a demanding, slightly raised voice) "I need to speak with you ...NOW!"

Subject 1: (somewhat confused) "Right now? My students are taking a quiz."

Subject 2: (in an even more demanding voice) "I said now. I mean now!"

Subject 2 walks toward Subject 1 in a threatening manner and continues, "I thought I told you to get your lesson plans in to me today! Is that too much for you?"

Subject 1 mumbles and tries to speak, but is interrupted by Subject 2.

Subject 2: "Oh, just forget it! I should've known you wouldn't get them finished! We'll talk about this later!"

Subject 2 storms out the door.

Subject 1 quietly stands there for a minute before addressing the students.

# **Scientific Method Review Quiz**

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1.	What is the first step in a scientific investigation?
n	What is a hypothesis?
۷.	what is a hypothesis:
3.	When conducting a scientific experiment, how many variables should be changed?
4.	State the steps of the scientific method in order.
5.	The numbers, or information, collected from an experiment are called

# Scientific Method Review Quiz Key

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1. What is the first step in a scientific investigation?

ANSWER: The first step in a scientific investigation is to state the problem or question.

2. What is a hypothesis?

ANSWER: A hypothesis is an educated guess to a question that can be tested by experimentation.

3. When conducting a scientific experiment, how many variables should be changed?

ANSWER: When conducting a scientific experiment, only one variable should be changed.

4. State the steps of the scientific method in order.

Answers may vary according to students or previous curriculum. Possible answers include the following:

- State the problem or question.
- Form a hypothesis.
- Design and conduct an experiment.
- Collect data.
- Analyze the data.
- Form a conclusion.

5.	The numbers, or information, collected from an experiment are called _	
	·	
	ANSWER: data	

# **Scientific Method Scoring Rubric**

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Total Points: 18 points possible

	3	2	1
Problem	The problem or question is clearly stated.	The problem or question is stated, but it is unclear.	The problem or question is not stated.
Hypothesis	The hypothesis is clearly stated.	The hypothesis is stated, but is unclear.	The hypothesis is not stated.
Design Test	Well-designed test is present.	Test is present, but it is not well-designed.	Test is not present.
Collect Data	Data is collected neatly in a data table.	Data is collected, but not organized in a data table.	Data is not present.
Analyze Data (graph)	Data is organized neatly and logically into a graph.	Graph is present, but is not neatly and logically organized.	Data is not organized in a graph.
State Conclusion	Conclusion is clearly and logically stated.	Conclusion is not clear or logical.	Conclusion is not present.

## **Teacher Information Sheet**

# **Dating Abuse Overview**

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Choose Respect is an initiative designed to help prevent dating abuse before it happens. This national effort is designed to encourage youth to take positive action to form healthy, respectful relationships. The program targets youth, ages 11–14, because unhealthy relationship behaviors often start early and can last a lifetime. According to recent CDC data, one in eleven youth (boys and girls) reports being a victim of physical dating violence. The same youth who report being victims of physical dating violence are also significantly more likely to report current sexual activity, fighting, binge drinking, and suicide attempts. Dating violence is associated with unhealthy sexual behaviors that can lead to unplanned pregnancies and STD infection and transmission. The issue of physical dating violence is clearly one that involves the overall health of adolescents. (1)

Choose Respect also guides youth to respond appropriately to situations they may encounter. Role-playing and problem solving activities aid young people in making better choices in their relationships. The initiative also encourages friends to play a role in supporting healthy behaviors and relationships and discouraging unhealthy ones. Both youth and adults should watch for warning signs that indicate an individual is being victimized by dating abuse as well as the signs that indicate a potential abuser. (1)

The following are warning signs that someone is being abused

- Isolation
- Loss of interest in things that were previously interesting
- Suspicious bruises or injuries
- Excuses for the dating partner's behavior
- Loss of confidence
- Alcohol and drug use

The following are warning signs that someone might be an abuser:

- Attempting to control what the dating partner wears
- Constantly checking up on the dating partner
- Threatening statements
- Destruction of the partner's belongings

Note: This overview is not meant to be a comprehensive look at the issue of dating violence. It is strongly recommended that the teacher consult the website at <a href="https://www.chooserespect.org">www.chooserespect.org</a> for more information.

# References

- Choose Respect. About Choose Respect. [cited 2007 July 27]. Available at URL: http://www.chooserespect.org/scripts/index.asp
- 2. Choose Respect. Get the Facts. [cited 2007 July 27]. Available at URL: <a href="http://www.chooserespect.org/scripts/teens/warningsigns.asp">http://www.chooserespect.org/scripts/teens/warningsigns.asp</a>

# **Scenarios Worksheet**

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Scenario #1 The person you are dating is telling you to buy them something to prove you like them. What should you do? (1)

Scenario #2 You hear a guy threatening to smack his girlfriend. What should you do? (1)

Scenario #3 Your friend shows up with a new haircut. All the kids are making fun of her. Your friend gets so mad she's ready to throw her backpack at them. What should you do? (2)

Scenario #4 Your boyfriend compliments another girl on her outfit. What should you do? (2)

Scenario #5 Your friends tease you about your relationship with someone you are dating. What should you do? (3)

Scenario #6 You are not interested in going out with someone in your group anymore. What should you do? (3)

Scenario #7 The person you are dating wants to go out with their friends instead of on a date with you. What should you do? (3)

Scenario #8 You and your friends see a girl marking up her boyfriend's locker. What should you do? (2)

#### References

- 1. Choose Respect: Boys Pocket Guide. [cited 2007 July 27]. Available from URL: <a href="http://www.chooserespect.org/scripts/materials/pocketguides/boyspocketguide.pdf">http://www.chooserespect.org/scripts/materials/pocketguides/boyspocketguide.pdf</a>
- 2. Choose Respect: Girls Pocket Guide. [cited 2007 July 27]. Available from URL: http://www.chooserespect.org/scripts/materials/pocketguides/girlspocketguide.pdf
- 3. Choose Respect: Community Action Kit. [cited 2007 July 27]. Available from URL: http://www.chooserespect.org/scripts/materials/actionkit/choose\_respect\_action\_kit.pdf

# **Teen Dating Violence Scenarios Worksheet Answer Key**

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Disclaimer: For a sensitive topic, such as this one, there will be many varied answers. This answer key provides some suggested answers.

Scenario #1 The person you are dating is telling you to buy them something to prove you like them. What should you do?

ANSWER: You should tell her that you shouldn't have to buy her things to prove you like her. (1)

Scenario #2 You hear a guy threatening to smack his girlfriend. What should you do?

ANSWER: You should tell an adult who can help calm the situation down. In this situation, it would not be safe to step in and stop him, so go find a trusted adult to tell. (1)

Scenario #3 Your friend shows up with a new haircut. All the kids are making fun of her. Your friend gets so mad she's ready to throw her backpack at them. What should you do?

ANSWER: If it's safe, step in and help your friend calm down. If it's unsafe, find a trusted adult to help calm your friend down. (2)

Scenario #4 Your boyfriend compliments another girl on her outfit. What should you do?

ANSWER: You should respect his opinion whether you agree or not. (2)

Scenario #5 Your friends tease you about your relationship with someone you are dating. What should you do?

ANSWER: You should say he/she is cool. (3)

Scenario #6 You are not interested in going out with someone in your group anymore. What should you do?

ANSWER: You should be honest and tell them that you just want to be friends. (3)

Scenario #7 The person you are dating wants to go out with their friends instead of on a date with you. What should you do?

ANSWER: You should tell him or her to have a great time. (3)

Scenario #8 You and your friends see a girl marking up her boyfriend's locker. What should you do?

ANSWER: You should tell her to stop and remind her that she is defacing school property. (2)

## References

- 1. Choose Respect: Boys Pocket Guide. [cited 2007 July 27]. Available from URL: <a href="http://www.chooserespect.org/scripts/materials/pocketguides/boyspocketguide.pdf">http://www.chooserespect.org/scripts/materials/pocketguides/boyspocketguide.pdf</a>
- 2. Choose Respect: Girls Pocket Guide. [cited 2007 July 27]. Available from URL: http://www.chooserespect.org/scripts/materials/pocketguides/girlspocketguide.pdf
- 3. Choose Respect: Community Action Kit. [cited 2007 July 27]. Available from URL: http://www.chooserespect.org/scripts/materials/actionkit/choose\_respect\_action\_kit.pdf

# **Scientific Method Worksheet**

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Instructions: Your task is to design a scientific experiment to answer the question discussed in class. Fill in this worksheet, describing the parts of your scientific investigation.

Problem or Question	
Hypothesis	
Experiment	
Collect Data	
Analyze Data	
Form a Conclusion	

# **Scientific Method Worksheet Answer Key**

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Instructions: Your task is to design a scientific experiment to answer the question discussed in class. Fill in this worksheet, describing the parts of your scientific investigation.

#### **Problem or Question**

How does teen dating violence in our state compare to teen dating violence across the United States?

## **Hypothesis**

Answers will vary. A suggested answer might be, "Teen dating violence is lower in our state compared to teen dating violence across the United States."

## **Experiment**

Answers will vary. Students need to come up with the idea that creating and distributing a survey to students across the state would be the best way to test for this data. Students will be assigned to create a short survey and bring it to class. Answers can be discussed for quality of survey questions. Because of the sensitivity of this subject, however, student surveys can be turned in and evaluated by the teacher instead of distributed to obtain data. Data for this experiment can be found on the Internet.

#### **Collect Data**

Students are directed to the Web Resource in Step 4 to obtain data to complete a data table for this part of the scientific method.

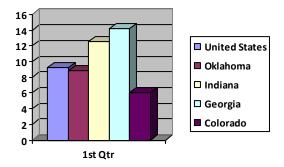
A sample data table could be as follows:

Location	% of teenagers experiencing teen dating violence
United States	9.2
Oklahoma	8.8
Indiana	12.5
Georgia	14.2

# Analyze Data

Students should use graph paper to create a bar graph comparing the national frequency to any five states' frequency of teen dating violence.

A sample graph might look as follows:



#### Form a conclusion:

Answers will vary, depending on which state the students live in. However, all answers should contain state-to-state comparisons as well as a state-to-nation comparison.

# **Survey Question Examples**

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Directions: The following are examples of possible survey questions students might generate. The comments are merely suggestions for the teacher.

## Example 1

Do you know anyone who lets their boyfriend or girlfriend treat them badly?

This is an example of a POOR survey question. Points to discuss with the students might include

- 1. What is meant by "lets"?
- 2. How do you know the person is willingly permitting the behavior?
- 3. What does "treat them badly" really mean? The question is too vague.
- 4. There is evidence of bias in this question. The term "lets" indicates the author's viewpoint.

## Example 2

Does your dating partner get annoyed or angry when you spend time with your friends?

Not usually/ Sometimes/Always

This is an example of a BETTER survey question. Points to discuss with the student might include the following:

- 1. The behavior is more defined in this question. The terms "annoyed or angry" represent a specific response.
- 2. The phrase "spend time" is still somewhat vague. It would be better if a specific activity was listed.
- 3. The choices, Not Usually/Sometimes/Always permit the student to be more specific than just "Yes."
- 4. There is little evidence of bias in this question.

For more help, please consult http://owl.english.purdue.edu/owl/resource/559/06/

#### References:

1. Creating Good Interview and Survey Questions, Available at URL: http://owl.english.purdue.edu/owl/resource/559/06/