

Daniel Scientific Method warm up/exit ticket/lesson

BACKGROUND KNOWLEDGE NEEDED

Students should be familiar with the following vocabulary: constant, control, subject, variable, hypothesis, patterns, cause and effect. (The PPT/PDF resource contains definitions and some examples if needed for review or presentation)

Procedure:

- 1) Read Daniel 1:3-16 and have students answer questions about the scientific method based on the text.

OPTION 1: Three versions (Holman Christian Standard Bible, Easy-to-Read and New International Version) are included. For struggling readers, the E-T-R version is suggested.

OPTION 2: Students can be divided into three groups and each group is assigned a different version in order to compare and contrast the answers to the questions based on which version is used. (answers will be the same, only the wording will be different)

OPTION 3: To scaffold instruction, students can be given the answers (boxed and in random order) to match with the questions.

OPTION 4: Students will be able to match some questions and answers logically even if they cannot fully comprehend the text. (ie. Only one question asks "how many" and only one answer is a bare number) Lead a discussion on test taking hints and using context clues to determine matches.

- 2) Discuss the correct answers and findings.

PPT or PDF of Power Point includes additional free online resources about the scientific method and the book of Daniel.

3 The king ordered Ashpenaz, the chief of his court officials, to bring some of the Israelites from the royal family and from the nobility— 4 young men without any physical defect, good-looking, suitable for instruction in all wisdom, knowledgeable, perceptive, and capable of serving in the king's palace—and to teach them the Chaldean language and literature.

The king assigned them daily provisions from the royal food and from the wine that he drank. Among them, from the descendants of Judah, were Daniel, Hananiah, Mishael, and Azariah. 7 The chief official gave them other names: he gave the name Belteshazzar to Daniel, Shadrach to Hananiah, Meshach to Mishael, and Abednego to Azariah.

8 Daniel determined that he would not defile himself with the king's food or with the wine he drank. So he asked permission from the chief official not to defile himself. 9 God had granted Daniel favor and compassion from the chief official, 10 yet he said to Daniel, "My lord the king assigned your food and drink. I'm afraid of what would happen if he saw your faces looking thinner than those of the other young men your age. You would endanger my life with the king."

11 So Daniel said to the guard whom the chief official had assigned to Daniel, Hananiah, Mishael, and Azariah, 12 "Please test your servants for 10 days. Let us be given vegetables to eat and water to drink. 13 Then examine our appearance and the appearance of the young men who are eating the king's food, and deal with your servants based on what you see." 14 He agreed with them about this and tested them for 10 days. 15 At the end of 10 days they looked better and healthier than all the young men who were eating the king's food. 16 So the guard continued to remove their food and the wine they were to drink and gave them vegetables.

QUESTIONS

What was the question to be answered?

What was the independent or manipulated variable?

What was the dependent or responding variable?

What were the constants?

Who was in the control group?

How many/who subjects were part of the experimental cohort?

What was Daniel's hypothesis?

How long did the trial last?

Patterns can be used as evidence to support an explanation. When the guard compared and contrasted the two groups of experimental subjects, what pattern did he notice?

Cause and effect relationships are routinely identified, tested, and used to explain change. What cause and effect relationship did the guard examine?

How did the guard analyze and interpret the results of the experiment? What conclusion did the guard draw?

ANSWER KEY

What was the question to be answered? Which diet yielded the healthiest subjects

What was the independent or manipulated variable? Type of food (experimental group got vegetables and water; control group ate the King's food and wine)

What was the dependent or responding variable? How healthy the subjects looked

What were the constants? All subjects were captives in Babylon. All subjects were from the royal family and from the nobility— young men without any physical defect, good-looking, suitable for instruction in all wisdom, knowledgeable, perceptive, and capable of serving in the king's palace

Who was in the experimental group? Daniel, Hananiah, Mishael, and Azariah (AKA Daniel, Shadrach, Meshach and Abednego)

Who was in the control group? All other Israelite captives selected for training

How many/who subjects were part of the experimental cohort? 4

What was Daniel's hypothesis? If the four of us eat vegetables and water, then we will look healthier than those eating the King's food and wine.

How long did the trial last? 10 days

Patterns can be used as evidence to support an explanation. When the guard compared and contrasted the two groups of experimental subjects, what pattern did he notice? At the end of 10 days the experimental group looked better and healthier than all the young men who were eating the king's food.

Cause and effect relationships are routinely identified, tested, and used to explain change. What cause and effect relationship did the guard examine? How diet affected health

How did the guard analyze and interpret the results of the experiment? What conclusion did the guard draw? The guard concluded Daniel's hypothesis was correct and continued to remove the King's food and wine, replacing them with water and vegetables.

Directions: cut apart these answers, then match each to the appropriate question.

10 days

Which diet yielded the healthiest subjects?

4

How diet affected or relates to health

Daniel, Shadrach, Meshach and Abednego

How healthy the subjects looked

Type of food

If the four of us eat vegetables and water, then we will look healthier than those eating the King's food and wine.

At the end of 10 days the experimental group looked better and healthier than all the young men who were eating the king's food.

All subjects were captives in Babylon. All subjects were from the royal family and from the nobility— young men without any physical defect, good-looking, suitable for instruction in all wisdom, knowledgeable, perceptive, and capable of serving in the king's palace

All other Israelite captives selected for training

The guard concluded Daniel's hypothesis was correct and continued to remove the King's food and wine, replacing them with water and vegetables

Easy-to-read version

3 Then King Nebuchadnezzar ordered Ashpenaz, the man in charge of his officials, to bring some of the boys into the palace to train them. He was to include boys from among the Israelites,[c] from important Judean families, and from the royal family of Judah. 4 King Nebuchadnezzar wanted only healthy boys who did not have any bruises, scars, or anything wrong with their bodies. He wanted handsome, smart young men who were able to learn things quickly and easily to serve in his palace. He told Ashpenaz to teach these young men the language and writings of the Chaldeans.

5 King Nebuchadnezzar gave the young men a certain amount of food and wine every day. This was the same kind of food that he ate. He wanted them to be trained for three years. After that they would become servants of the king of Babylon. 6 Among those young men were Daniel, Hananiah, Mishael, and Azariah from the tribe of Judah. 7 Ashpenaz gave them Babylonian names. Daniel's new name was Belteshazzar, Hananiah's was Shadrach, Mishael's was Meshach, and Azariah's was Abednego.

8 Daniel did not want to eat the king's rich food and wine because it would make him unclean. So he asked Ashpenaz for permission not to make himself unclean in this way.

9 God caused Ashpenaz, the man in charge of the officials, to be kind and loyal to Daniel. 10 But Ashpenaz told Daniel, "I am afraid of my master, the king. He ordered me to give you this food and drink. If you don't eat this food, you will begin to look weak and sick. You will look worse than other young men your age. The king will see this, and he will become angry with me. He might cut off my head. And it would be your fault."

11 Then Daniel talked to the guard who had been put in charge of Daniel, Hananiah, Mishael, and Azariah by Ashpenaz. 12 He said, "Please give us this test for ten days: Don't give us anything but vegetables to eat and water to drink. 13 Then after ten days, compare us with the other young men who eat the king's food. See for yourself who looks healthier, and then decide how you want to treat us, your servants."

14 So the guard agreed to test Daniel, Hananiah, Mishael, and Azariah for ten days. 15 After ten days, Daniel and his friends looked healthier than all the young men who ate the king's food. 16 So the guard continued to take away the king's special food and wine and to give only vegetables to Daniel, Hananiah, Mishael, and Azariah.

New International Version

3 Then the king ordered Ashpenaz, chief of his court officials, to bring into the king's service some of the Israelites from the royal family and the nobility— 4 young men without any physical defect, handsome, showing aptitude for every kind of learning, well informed, quick to understand, and qualified to serve in the king's palace. He was to teach them the language and literature of the Babylonians.[b] 5 The king assigned them a daily amount of food and wine from the king's table. They were to be trained for three years, and after that they were to enter the king's service.

6 Among those who were chosen were some from Judah: Daniel, Hananiah, Mishael and Azariah. 7 The chief official gave them new names: to Daniel, the name Belteshazzar; to Hananiah, Shadrach; to Mishael, Meshach; and to Azariah, Abednego.

8 But Daniel resolved not to defile himself with the royal food and wine, and he asked the chief official for permission not to defile himself this way. 9 Now God had caused the official to show favor and compassion to Daniel, 10 but the official told Daniel, "I am afraid of my lord the king, who has assigned your[c] food and drink. Why should he see you looking worse than the other young men your age? The king would then have my head because of you."

11 Daniel then said to the guard whom the chief official had appointed over Daniel, Hananiah, Mishael and Azariah, 12 "Please test your servants for ten days: Give us nothing but vegetables to eat and water to drink. 13 Then compare our appearance with that of the young men who eat the royal food, and treat your servants in accordance with what you see." 14 So he agreed to this and tested them for ten days.

15 At the end of the ten days they looked healthier and better nourished than any of the young men who ate the royal food. 16 So the guard took away their choice food and the wine they were to drink and gave them vegetables instead.