

Smart Moves Lesson 10

What Do You Know Bingo

Overview:

This bingo game offers students a fun opportunity to demonstrate what they know about decision making, environmental science, safety, health, alternative transportation, and urban planning. The game can be used as a pre- and post-test for the information in the SMART MOVES Curriculum as well as a tool to reinforce concepts throughout the school year.

Objectives:

Students will be able to:

- Demonstrate their knowledge of concepts taught in the SMART MOVES Curriculum: decision making, environmental science, safety and health, alternative transportation, and urban planning.
- Work cooperatively in groups to develop answers to the questions.

Time: 1 class period

Materials:

- Student Handout: *What Do You Know Bingo Card*
- Blank sheets of paper (for teams to record answers to the bingo questions)
- Marking pens
- Teacher's Resource: *Questions for What Do You Know Bingo*

Before you begin:

If you are using the game for post-assessment:

Preview the Teacher's Resource *Questions for What Do You Know Bingo*. Photocopy those pages of the resource that are relevant to the lessons your students completed in the SMART MOVES Curriculum. Cut on the lines between questions, discard those that do not apply to your students, and then place the questions in a container to draw from during the game.

In addition, photocopy the blank pages at the end of the resource and write questions that assess learning that resulted from your adaptations of, additions to, extensions of, or changes to the lessons. (For example, you might have approached defining values in a different way from how it was presented in the original lesson "Making Choices 1" or perhaps you offered additional information on global warming during "Cars, Trees and CO2.") Cut between the questions that you develop and place these in the container with the other questions.

If you are using the game as a pre-assessment:

Photocopy and cut up those pages of the resource that match the lessons that you plan to deliver.

Procedure:

1. Tell students that they will play a game that tests their knowledge of information related to transportation, safety and health, and actions that can improve our environment. (If you are using the lesson as a post-assessment, you might begin by summarizing briefly the lessons students completed and asking them to recall a few facts or activities from the lessons.)
2. Now have the class form teams of 2-4 students. Distribute one *What Do You Know Bingo Card* per team, an ample supply of blank paper, and marking pens. Have each team choose a secretary. Point out the five categories on the bingo card and then explain the following rules:

1. You will randomly draw a question, announce the category, and then read the question aloud.
 2. Each team will confer and come to a consensus on an answer, whereupon the secretary will write the team's answer on a blank piece of paper and raise his hand.
 3. After all teams have formulated an answer, you will ask the secretary who raised his hand first to display and announce the team's answer.
 4. If the team has the correct answer, a team member will make an X over the initials in any box in the appropriate category. (Tell the group that some questions may have multiple right answers and that you will be the judge of whether answers are correct.)
 5. If the first answer is incorrect, without revealing the correct answer, you will ask the secretary who raised his hand second to display his team's answer if it is different from the first team's incorrect response. Proceed until a team gives the correct answer. Supply the correct answer if no team is able to give it. If time allows, briefly discuss the correct response.
 6. The first team to cross out a row, column or diagonal line wins. (Or you might play "blackout bingo," in which all boxes on the card must be crossed out in order to win.) If time allows, distribute more cards and play again with the unasked questions and those that the teams were unable to answer correctly during the first game.
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3. If you used the game as a pre assessment: Tell the class that they will learn more about the topics covered in the game during the next few weeks and that they should be prepared to think about their personal principles and how they might apply them to daily decisions affecting the environment and their safety.
 4. If you used the game as a post assessment:
Suggest that many of the questions tested their knowledge of facts only. Ask how they might use these facts during their everyday routines. For example, how could

they convert into action their understanding of facts about using seat belts, planning an environmentally-sound city, or minimizing global warming. (If students participated in the "Making Choices" lessons, have them refer to the list of principles that they developed as a guide to their actions.)

Extensions:

More Games

- Invite your students to create more questions for *What do You Know Bingo* as you continue to study transportation issues.
- Challenge your students to develop their own transportation and planning games. Your students could take these games to other classrooms to both teach and assess knowledge.

Benchmarks:

Check the specific benchmarks for the lessons from which you used questions.

Handout: What Do You Know Bingo Card

VDA Values Decisions Actions	ES Environmental Science	SH Safety Health	AT Alternative Transportation	UP Urban Planning
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Teacher's Resource:

Questions for What Do You Know Bingo

Questions for VDA: Values/Decisions/Actions Category

Lessons: "Making Choices 1" and "Making Choices 2"

Category: VDA

Question: Who were John Locke, Jean Jacques Rousseau and Thomas Hobbes?

Answer: They were philosophers.

Category: VDA

Question: What does the phrase *the common good* mean?

Answer: A social system and environment that benefits all people

Category: VDA

Question: Two rules for scholarly discussion are: 1) There are no right answers, only answers with better reasons; and, 2) Disagree respectfully. What is the third rule of a scholarly discussion?

Answer: Really listen to the other person

Category: VDA

Question: Moral philosophy deals with right behavior; for example what is good and bad conduct for a government, group, or individual. What is another word (beginning with the letter "e") for "moral philosophy"?

Answer: Ethics

Category: VDA

Question: Some vegetarians never eat meat because they believe this is morally wrong. Concerning their diet, these people's philosophy could be described as which one: absolutism or consequentialism?

Answer: Absolutism

Category: VDA

Question: Supply the last word in the slogan that typifies the philosophy called utilitarianism. "The greatest happiness for the greatest _____".

Answer: number

Category: VDA

Question: Which philosopher described humans' natural state as "nasty, brutish, and short"?

Answer: Thomas Hobbes

Category: VDA

Question: Early English kings and queens probably really liked the philosophy of Thomas Hobbes? Why?

Answer: He believed in the absolute power of the monarchy (king, ruler).

Category: VDA

Question: John Locke's system of checks and balances on governmental power was a basis for a very important United States document. Which one?

Answer: the U.S. Constitution

Category: VDA

Question: Defining your values can help you make decisions about how to conduct your life. When your actions match your values, you could be described as having a positive character trait. What is that character trait? (Hint: It begins with the letter "i.")

Answer: integrity

Category: VDA

Question: What are the four problem-solving steps you used to address the problem of air pollution?

Answer: 1) Recognize a Real Problem, 2) Get the Facts, 3) Evaluate Options for Personal Action, and 4) Make a Decision

Category: VDA

Question: What are two right versus right issues in the problem of air pollution?

Answer: Answers may vary: people want to drive, but they also want clean air.

Category: VDA

Question: Name two reasons why people might have a hard time reducing their driving.

Answer: Answers may vary: You can go anywhere at any time in a car. It's easier to haul things around in a car. You have privacy. People are lazy; it's easier to drive than walk.

Category: VDA

Question: Name two reasons why people might want to use modes of transportation other than automobiles.

Answer: Answers may vary: Cars pollute. Taking light rail or buses means you don't have to find parking. Walking or biking is healthy for you.

Category: VDA

Question: Approximately how much carbon dioxide would you save the environment if you walked two miles instead of driving?

Answer: Approximately 2 pounds (or 0.98 lbs. per mile)

Questions for ES: Environmental Science

Lessons: "H2O and Cars," "Trees, Cars, and CO2," and "Making Choices 2"

Category: ES

Question: There is the same amount of water on Earth as there was 3 billion years ago. Why is this fact important to keep in mind?

Answer: Water is not being created so we should be careful not to pollute what we have.

Category: ES

Question: Why is 99% of the Earth's water unavailable for human use?

Answer: It's too salty or exists as polar ice.

Category: ES

Question: What is the connection between cars and water quality?

Answer: Cars can pollute the water.

Category: ES

Question: After changing the oil in a car, why is dumping the dirty oil into the storm sewer a bad idea?

Answer: It goes into the river and pollutes the water.

Category: ES

Question: What are two environmentally sound reasons for taking a car to a commercial car wash rather than washing it by hand?

Answer: Uses less water and water is recycled

Category: ES

Question: Cars emit CO₂, a colorless, odorless gas. What does CO₂ stand for?

Answer: Carbon dioxide

Category: ES

Question: Why is the greenhouse effect of concern to scientists and the world's citizens?

Answer: Causes warming of the atmosphere that affects our climate, health, and livelihood

Category: ES

Question: Give 3 negative effects of global warming.

Answer: Any three of the following: extreme weather events such as flooding; spread of disease and other health problems; stress on natural habitats of animals; dislocation of agriculture; expansion of deserts; rise in sea level.

Category: ES

Question: What's the relationship between cars and climatic changes?

Answer: Burning fuel causes CO₂; too much CO₂ causes global warming.

Category: ES

Question: Trees absorb CO₂ and emit oxygen. Give two reasons this fact is important to humans and other animals with lungs?

Answer: Absorbing CO₂ can help minimize global warming; humans need oxygen to breathe.

Category: ES

Question: If your values include helping improve the air for everyone, what should your

family consider when purchasing a car?

Answer: Fuel efficiency

Category: ES

Question: Regarding transportation, what are two things you can do to improve air quality?

Answer: Reduce trips in fuel-burning vehicles; use transportation other than the car; use fuel-efficient cars.

Category: ES

Question: What is the mathematical formula you could use to figure how many pounds of CO₂ is emitted into the atmosphere from your car travel each week?

Answer: *miles traveled per week* x lbs. of CO₂ per gal burned = lbs of CO₂ emitted

Miles per gal

Questions for SH: Safety and Health

Lessons: "Safety" and "Get Moving and Get Healthy"

Category: S H

Question: Why is it more appropriate to refer to transportation mishaps as "crashes" or "collisions" instead of "accidents"?

Answers: "Accident" implies no blame; most "accidents" are preventable.

Category: S H

Question: What should you do as soon as you get into a car for even a short trip?

Answer: Buckle your seatbelt.

Category: SH

Question: What is dangerous about having fun with your friends as you walk along a

busy street?

Answer: Lose focus on traffic

Category: SH

Question: You have the walk light to cross the street, but a car is turning at the intersection. What should you do to make certain you will not be hit?

Answer: Make eye contact with the driver; make certain the driver sees you.

Category: SH

Question: What is the difference between traffic rules a car driver must obey and those a bicyclist must obey?

Answer: None. Bicyclists must obey the same rules of the road as drivers.

Category: SH

Question: What safety problem do vehicles powered by electrical engines, such as trains or electrical cars, pose for pedestrians and even drivers of cars?

Answer: They are quiet so people are less likely to hear them coming.

Category: SH

Question: In the United States, 800 people die from bike crashes each year. What type of injury have most of them sustained?

Answer: A head injury

Category: SH

Question: What safety equipment should a bicyclist, skate boarder, or in-line skater always wear?

Answer: A helmet

Category: SH

Question: When are bus drivers required to let you off between regular bus stops?

Answer: At night (if you are traveling alone and disembarking on a dark street)

Category: SH

Question: What are your chances of being seriously injured in a car accident during your lifetime?

Answer: 1 in 3

Category: SH

Question: Some people don't fasten their seat belts because they think it is safer to be thrown from a vehicle than to be inside it during a crash. Is this true or false?

Answer: False

Category: SH

Question: Thirty percent of the traffic fatalities in the state of Colorado involve speeding. Okay, you may be too young to drive, but what are two things you can do as a passenger to protect yourself against speeding drivers?

Answer: Remind the driver to obey the speed limit; don't ride with friends who speed; be ready to start trips on time.

Category: SH

Question: There are several strategies for avoiding injury when you are falling from a skateboard or off in-line skates. Name one.

Answer: Rolling, relaxing, purposely landing on fleshy parts of the body

Category: SH

Question: Should a pedestrian face toward or away from oncoming traffic?

Answer: Toward

Category: SH

Question: The word that describes a pedestrian who crosses the street between intersections is jaywalker. Why is jaywalking dangerous?

Answer: Drivers don't expect to see people in the street between intersections; cars are going faster between intersections.

Category: SH

Question: What is the average number of minutes a person your age should spend in moderate activity each day?

Answer: 30-60 minutes

Category: SH

Question: To take your pulse you should use your thumb to feel for the heart beat. True or false?

Answer: False

Category: SH

Question: Biking burns how many calories every 30 minutes?

Answer: 360 calories

Category: SH

Question: Name three benefits of vigorous exercise such as brisk walking, biking, or roller blading.

Answer: Answers may vary: Exercise helps control weight; prevents bone loss; increases strength; helps manage stress; helps you sleep better.

Questions for AT: Alternative Transportation

Lessons: "Pushing Pedal Power," "Making Choices 2," "Get Moving and Get Healthy"

Category: AT

Question: Name two ways that advertising agencies make automobiles seem desirable to buyers.

Answer: May vary: Great care is taken to photograph the automobile so it looks like a beautiful object; advertisers use beautiful people and gorgeous surroundings to enhance the car; the text or voice-over uses strong language that suggests fun, adventure, and beauty.

Category: AT

Question: How does the reality of driving a car differ from the automobile advertisements?

Answer: May vary: Driving a car can be more stressful than the ad shows and the trip isn't usually as beautiful or as exciting as the advertisements suggest.

Category: AT

Question: Name four modes of transportation – other than the car – that you can use to get around Portland.

Answer: May vary.

Category: AT

Question: Name one thing that the City of Fort Collins has done to encourage commuting by bicycle.

Answer: The city has built bike paths and bike lanes.

Category: AT

Question: What is the most significant thing that makes a bicycle kind to the environment?

Answer: May vary: It doesn't burn gasoline and doesn't emit pollutants.

Category: AT

Question: How does the size of a bicycle contribute to making a city a more livable place?

Answer: May vary: It requires minimal space for storage and it doesn't require the construction of parking lots. It doesn't take up much space on the road.

Category: AT

Question: What are two things that make bicycle riding attractive to an individual person?

Answer: A bicycle is far less expensive than an automobile and bicycle riding is good for one's health.

Category: AT

Question: Buses burn gasoline just like cars. Why are they considered a cleaner alternative than cars?

Answer: A car only carries 1-4 people. Buses can carry up to 60 people, which means fewer cars on the road polluting the air.

Category: AT

Question: What if you want to ride your bike and take the bus? How do you get your bike on the bus?

Answer: The Portland buses have bike racks on them so you can ride your bike to the bus, then put your bike on the bike rack and hop on the bus.

Category: AT

Question: Name a form of transportation that's been around for thousands of years, doesn't involve a vehicle, and is the cleanest one of all.

Answer: Walking

Questions for UP: Urban Planning

Lessons: "Form, Function, and Freeways" and "ECO Town"

Category: UP

Question: How did our highways and roads come into existence? Name two causes.

Answer: May vary: Natural causes – old, flat riverbeds and dry glacial flows made for easy passage. Economic reasons – the Native Americans and early White settlers used convenient paths to get from fishing sites or trading sites and back to their homes.

Category: UP

Question: What does a platter do?

Answer: Considers land uses and designs streets to meet the needs of pedestrians and drivers of vehicles

Category: UP

Question: What would be the first thing a planner would do before he or she began to consider a new design for a roadway.

Answer: Observe or study how the existing roadway is used

Category: UP

Question: Name ten transportation facilities that a planner might need to include in his or her plan for a street.

Answer: May vary – crosswalk, bus stop, bus shelter, street lights, trashcan, sidewalks, bike path, bike stand, speed bumps, streetlights, benches, medians, planters

Category: UP

Question: A city planner tries to design a street so that it meets a mix of transportation needs. The planner wants to be sure that the various modes of transportation are not in conflict with each other. Describe a typical conflict between two different modes of transportation.

Answer: May vary: A pedestrian trying to cross a busy street, a bicyclist slowing down a driver, etc.

Form for questions that reflect adaptations, changes, and/or extensions to the original lessons

Category:

Question:

Answer: