



**Union of Concerned Scientists**  
Citizens and Scientists for Environmental Solutions

## **Trivia Night Kit**

**Welcome to the *Cooler Smarter* Trivia Night Kit!** This Kit is based on the Union of Concerned Scientists consumer guide, *Cooler Smarter: Practical Steps to Low Carbon Living* and contains all the tools you'll need to host a successful trivia night. We're excited to help you and your guests navigate conflicting messages and advertising with a reliable source of practical, science-based advice to help you make smart choices about the things that matter most for reducing your carbon emissions.

With *Cooler Smarter* we challenge you to lower your carbon footprint by 20% this year. It's easier than you think! We'll give you the knowledge; you take action, and pretty soon you'll see your footprint begin to shrink!

**While *Cooler Smarter* helps you "sweat the right stuff" and make the smartest choices for the climate, you can help others get 20% cooler by hosting your own *Cooler Smarter* Trivia Night!**

Once you've planned your trivia night head on over to [CoolerSmarter.org](http://CoolerSmarter.org) to use UCS's interactive tool for helpful tips on lowering your carbon footprint today!

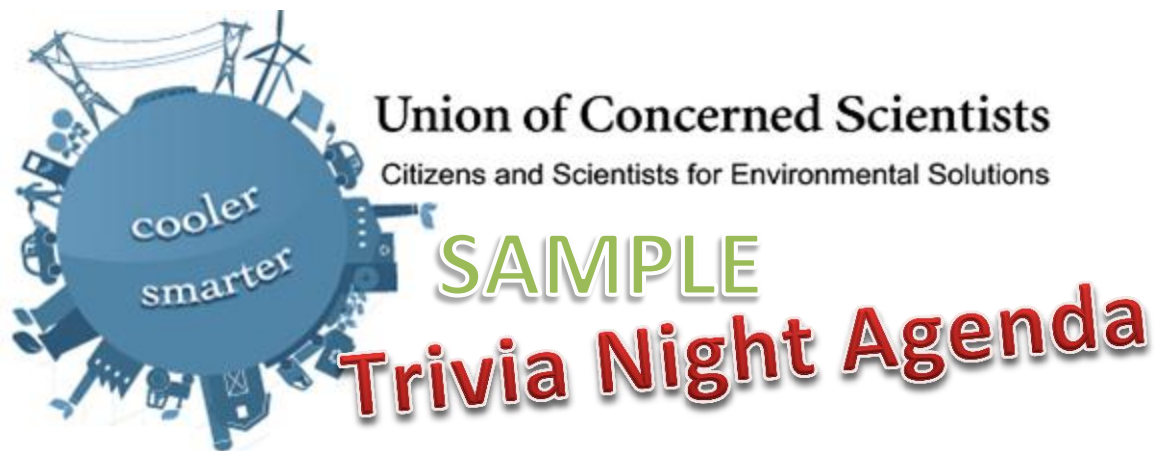
**Inside your *Cooler Smarter* Trivia Night Kit you'll find all the tools you need to host a successful trivia night:**

- **Sample trivia night agenda**
- **5 rounds of *Cooler Smarter* questions and answers**
- **Tips for planning your trivia night**

**Seven *Cooler Smarter* Trivia Night Tips:**

- 1. Location, Location, Location:** Think about the size of the group you'd like to invite and your space needs for the evening. Do you want to reserve a room at a local watering hole? Can you host the event in your own home? Finding an easily accessible space with enough seating in the right atmosphere are key ingredients to a trivia night! Remember that you will need a fairly quiet spot so everyone can hear the questions.

2. **Full Bellies and Happy Hearts:** Or, happy minds! It's a good idea to have something to snack on at your trivia night. A snack table can act as a catalyst for mingling if your trivia night invitees aren't all acquainted and can fuel the competition in the room!
3. **You're Invited:** We suggest sending out invites two weeks in advance. This will give your invitees enough time to save the date and give you plenty of time to prepare! Don't forget to remind them a day or two before.
4. **Minimal Materials Required:** It doesn't take much to host a Trivia Night. You'll need some notecards and pens for the teams to write their answers down on (one notecard per team, per round), a whiteboard or large piece of paper to keep score, and of course the questions and answers provided in this Kit.
5. **Life of the Party:** Pick the right emcee to host the evening! You'll want to think about who can keep the energy at a fun level and move the game along to keep you on time. It also works well to have two emcees so they can alternate reading off the questions and scoring the responses.
6. **Team Names:** Having your teams choose their own names can be a great icebreaker and increase team comradery. Team chants or songs not required but highly recommended!
7. **Cool Off Together:** Have folks sign up to take the *Cooler Smarter 20%* Challenge together! Track your progress as a group and share tips, troubles, and successes. Can you have a computer available at your trivia night for people to use the interactive tool on [CoolerSmarter.org](http://CoolerSmarter.org)?
8. **Be Creative:** We give you 5 rounds of questions, but if you are feeling ambitious, swamp out a round with a set of questions of your own making. You could ask participants about local climate impacts, or clean energy solutions in the community. Be careful not to make them too tough though, the goal is to be informative and have fun!



**7:00:** People start arriving, milling and getting food and drink.

**7:15:** Host quiets the room and welcomes everyone.

**7:25:** Host explains that each team should be relatively equal or about 3-5 people (depending on the number of people assembled). Take a minute to introduce yourselves and pick a team name that will be maintained through all rounds.

**7:35:** Host quiets the room and explains how trivia night will work. There are 5 rounds of between 4 and 6 questions each. You will work with your team to answer each round of questions on the answer sheets on each table. At the end of each round, we will collect your answer sheet, tally up each teams points, and give you the answers. At the end of the 5 rounds, we'll announce the winner. 2 rules: no cheating: smartphones, iPads etc. and no yelling out the answers.

**7:40:** Round 1: Cooler Smarter

**7:55:** Round 2: Cooler Smarter

**8:10:** Round 3: Cooler Smarter

**8:25:** Round 4: Cooler Smarter

**8:40:** Round 5: Straight Up Science and Policy

**8:40:** Tie-breaking question(s) (if needed)

**8:45:** Announce the winners! Thank everyone for coming, announce the 20 percent challenge and invite your trivia night guests to take it with you.

# QUESTIONS

## Round 1: 5 Questions, total of 5 points

**Q: In the United States what mode of transportation racks up enough miles in one year to complete 14,000 round trip voyages to the sun and back?**

- A. Air Travel
- B. Cars and light trucks
- C. Passenger Trains and subways

**A:** (B) Cars and light trucks. The United States racks up a mind boggling 2.7 trillion miles annually from cars and light trucks. Consider the total emissions when the average car driven 12,000 miles a year emits 7 tons of CO<sub>2</sub> into the atmosphere each year.

**Q: If all Americans reduced their emissions by 20 percent, over one billion tons of carbon dioxide would be prevented from entering the atmosphere. This is the equivalent of taking how many average sized coal-burning power plants offline?**

- A. 2
- B. 20
- C. 200

**A :** (C) 200 of the nation's 600 coal burning power plants

**Q: What energy saving device can you use to save 15 percent or more on your home heating and cooling costs?**

**A:** Programmable Thermostat. Using a programmable thermostat can also lower your carbon dioxide emissions by more than half a ton annually.

**Q: A retrofit to what iconic American building included replacing 6,500 windows and resulted in a 40 percent reduction in energy usage.**

**A:** The Empire State Building. The retrofits made to the building save \$4.4 million and avoid 105,000 tons of carbon dioxide emissions per year!

**Q: No longer just for photo albums, old furniture, and ghosts if every American household added this product to their attic the nation could save more than \$1.8 billion in annual energy costs.**

**A:** Insulation! If every American household added insulation to their attics we would prevent more than 12 million tons of carbon dioxide out of the atmosphere each year, the equivalent of emissions from some 2 million cars.

## Round 2: 5 Questions, total of 5 points

**Q: Did you know the typical American home is full of vampires?! Consuming between 5 and 10 percent of electricity generated in the United States how many energy vampires, or devices drawing power at all times, does the American family have plugged in?**

- A. 15
- B. 25
- C. 40

**A:** (C) 40 devices

**Q: Our nation's third-largest city is implementing a plan to reduce its emissions to 25 percent below 1990 levels by 2020, name this city.**

**A:** Chicago. Eighteen of the twenty largest U.S. cities have made commitments to significantly reduce their global-warming emissions.

**Q: California's Renewable Electricity Standard passed in 2011 is one of the most aggressive renewable-energy laws in the country. It requires utilities to derive at least what percentage of their electricity from clean and safe renewable sources like wind and solar power by the year 2020?**

**A:** One third or 33% of California's electricity is to come from clean, safe renewable sources by 2020. The standard gives investors and developers the certainty they need to develop plans and make investments. The law provides an important model for the nation.

**Q: This corporation wants you to "save money to live better" but maybe they should start saving energy to live better. One of the largest corporations in the world is also the largest consumer of electricity in the United States. What corporation is this?**

**A:** Walmart, though they recently pledged to make 22 million tons' worth of reductions in their global warming emissions by 2015. That's the equivalent of taking nearly 4 million cars off the road.

**Q: The global warming emissions of the average American are how many times greater than the global average?**

- A. 1.5
- B. 2
- C. 4

**A:** (C) The average American's global warming emissions—at 21 tons per year—are FOUR TIMES the global average per person and twice that of many industrialized nations such as France or Japan.

### Round 3: 5 Questions, total of 5 points

**Q: Don't wash energy savings down the drain. Washing in hot water uses at least WHAT times more energy than a cold-water wash?**

- A. 3 times
- B. 5 times
- C. 8 times

**A:** (B) 5 times, even a warm-water wash uses approximately double the energy of a cold one. With today's detergents, cold water washes can get your clothes just as clean and with much fewer emissions.

**Q: While local farms that practice sustainable agriculture should be supported for many reasons, there is a common misconception around emissions from food. Which aspect of your food purchasing only contributes 4% of total food emissions on average?**

- A. Transportation from farm to supermarket
- B. Chemical pesticides and farm equipment
- C. Electricity used on farms and for food processing

**A:** (A) Transportation -- the trip from the farm to your supermarket only contributes about 4% while production of food accounts for 83% of food-related emissions.

**Q: Have you ever thought about how much carbon emissions are associated with your plate of pasta? If you compare the carbon emissions, how many pounds of pasta could you eat before matching the emissions of just 1 pound of beef or pork?**

- A. 6 lbs
- B. 11 lbs
- C. 18 lbs

**A:** (C) 1lb of beef or pork carries 18 times the emissions of 1lb of pasta. Because the average American diet includes nearly four times the global average consumption of meat, this can really add up! An average family of four that cuts their meat intake in half could avoid roughly 3 tons of emissions annually.

**Q: At its height in 1846 which U.S. energy industry had a fleet that included more than 700 ships and produced upwards of 18 million gallons of fuel?**

**A:** Whaling. The U.S. whaling fleet slaughtered nearly 8,000 whales annually in pursuit of whale oil for burning. Yet, by the second half of the 1800s, whale oil was quickly displaced by kerosene and soon thereafter by the electric light. It's just one example of how quickly shifts can happen in the way we produce and use energy.

**Q: The standard paperback book is responsible for 5.5 pounds of CO2 emissions in its manufacture and transportation to your local bookstore. Considering the emissions created by the production of an e-reader, how many books would you need to download to your e-reader before you start lowering your carbon footprint?**

- A. 1-15
- B. 20-40
- C. 50-60

A: 20-40 books. Turns out that it isn't worth our time worrying about the carbon footprint of the way we read. That 5.5 lbs of CO2 emissions per paperback book is less than the CO2 emissions we emit when making a 6 mile round trip in a typical car to the bookstore!

#### **Round 4: 6 Questions, worth 7 points**

**Q: Two part question:**

**1) Our energy systems are remarkably inefficient. On average, what percentage of a gallon of gasoline goes toward propelling the car or truck?**

**2) On top of that, on average only what percentage of energy produced from a fossil fuel power plant is used for electricity?**

A: Part 1) 15%-20%, Part 2) 33% or one third (Scoring note: feel free to give some wiggle room to the teams and award points to the teams that are closest to the correct answers.)

**Q: Global wind energy capacity has increased at almost twice the projections of the International Energy Agency, reaching nearly 160,000 megawatts in 2009, which is enough energy to power over 46 million homes. What country has experienced a 20-fold increase in installed wind capacity between the years 2005-2009?**

A: China

**Q: If you and 19 of your friends gave up drinking water, soda, and juices from plastic containers the emissions avoided from the saved plastic would cut as much CO2 annually as a car would by driving almost half the distance of the equator OR how many miles?**

- A. About 12,000 miles
- B. About 18,000 miles
- C. About 25,000 miles

A: About 12,000 miles. The earth's circumference is 24,901.55 miles.

**Q: Each year Americans waste a nationwide total of \$13 billion worth of energy from what?**

- A. Home heating and cooling
- B. Idling cars or trucks
- C. "Vampire" electronics

**A:** (A) Heating and cooling. One quarter of CO<sub>2</sub> emissions from heating and cooling escape residential buildings through holes and cracks!

**Q:** If you switch from a 20 mpg car to a 40 mpg car, how much money would the average American save in reduced gasoline costs each year assuming a gas price of \$4.00 per gallon?

**A:** Driving the average 12,000 miles per year, you'd save some 300 gallons of gas each year, or about \$1,200 at \$4.00 per gallon. That's worth \$18,000 over the 15-year life of the car.

**Q:** The activities of the average American emit 21 tons of global warming emissions per person per year—that's a pretty big number to get your head around. If you were driving an average car, how far would you have to drive to create that amount of emissions?

- A. Across the continental U.S.
- B. Across the Atlantic ocean
- C. Around the world at the equator

**A:** (C) around the world at the equator.—some 24,900 miles!

### **Round 5: Straight up Science and Policy - 4 Questions, possibility of earning 8 points**

**Q1 Alternative:** Which of these was not one of the science-based EPA standards that the Obama administration issued in draft or final form in the last year?

- A. Cross state air pollution
- B. Mercury and air toxics
- C. Power plant carbon standard
- D. Fairy dust

**A:** (D) Fairy dust. Congress debated legislation banning the EPA from regulating “farm dust” claiming that this was government overreach and killing jobs. This was nicknamed the “fairy dust” regulation because there are no farm dust regulations in existence.

**Q:** Which president is responsible for signing the Clean Air Act and Clean Water Act and for forming the Environmental Protection Agency?

**A:** Richard Nixon

**Q:** Name as many of the 5 naturally occurring greenhouse gases as you are able. Each is worth one point.

**A:** Water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

**Question:** Between 2002 and 2008 fossil fuel industry received twice the amount of subsidies from the U.S. government than given to renewable energy. What was the total amount of the subsidies given for oil, coal, and natural gas?



- A. \$7.2 billion
- B. \$27 billion
- C. \$72 billion

**A:** (C) \$72 billion!

**Tie Breaker Question (if needed):**

**Tie Breaker: In what year did global investment in renewable sources of energy like wind and solar power exceed total investments in carbon-based energy?**

**A:** In 2008. According to one financial assessment, when businesses focused on energy efficiency are factored in, the climate-related business sector now has global revenues even larger than the aerospace or defense industries.

**Total Points Available**

**Round 1: 5 points**

**Round 2: 5 points**

**Round 3: 5 points**

**Round 4: 7 points**

**Round 5: 8 points**

**Total: 30 points**

**Tiebreaker Question 1 point**