

## Background notes for teachers

What if every choice you made had a carbon consequence and you had to manage a carbon allowance card as well as a credit card? What if buying sweets or downloading music cost CO<sub>2</sub> as well as money from your pocket? If a family member won £1500 on the lottery would you rather they bought a condensing boiler or a giant plasma screen TV? Would you prefer your school to upgrade the heating controls or install a wind turbine? If you have family members abroad would it be better if they came to visit you? And how would you feel if you won a flight to New York?

These are just some of the questions that pupils playing Cut Your Carbon have to grapple with. Set in a world where every UK citizen has an annual carbon allowance card, Cut Your Carbon is a fun and innovative way to understand more about the effect our personal lifestyle choices have on the planet.

This interactive version of the game is suitable for Key Stage 2 pupils. We think it is probably best for Years 4, 5, or 6. You can save the game and exit at any point, and then restart at a later date. The game is divided up into the twelve months of the year. We consider that the game will take between 40 minutes to one hour to complete.

## The game

We have tried to make the interactive game instructions clear for both pupils and teachers but there are a few extra things we would like to point out.

1. Divide the class into teams. (Maximum 6 teams)
2. Each team starts with 10,000 kgCO<sub>2</sub>. (We have chosen this as a starting amount as it is the amount of CO<sub>2</sub> that the average UK citizen produces every year).
3. As the game progresses through the year the teams will win CO<sub>2</sub> onto the card or lose CO<sub>2</sub> off it. The team that has the most CO<sub>2</sub> left at the end is the winner.
4. At the *Select Your Teams* screen, only one team can choose each dinosaur. The game can be played with any number of teams between 2 and 6. As the dinosaur families lose very different amounts of CO<sub>2</sub>, it's probably best that each dinosaur family is chosen by the pupils (first game) and divided in a random way (second and subsequent games).
5. You can check the scores at any point during the game. If you check after the dinosaur families have been allocated you will see that all teams have lost 2,000 kgCO<sub>2</sub> and whatever their dinosaur family will use for the year. So the 10,000 kgCO<sub>2</sub> has already shrunk by a lot!
6. The questions are sorted into categories. They are:
  - Fun (Jan and Oct)
  - Travel (Feb and Aug)
  - Energy (April and Nov)
  - Water (May)
  - Food (July)There are four or five different questions for each month. The computer chooses them randomly. When you play the game a second or third time the same questions may come up or they may not. We cannot control this.
7. The teams want to pick the answer that will lose as little CO<sub>2</sub> from their score as possible, or add as much CO<sub>2</sub> as possible.
8. The game always shows the score for all four answers even if only they haven't all been chosen. The teacher therefore needs to manage this bit. You can use the ? button at the side of each answer for more information/learning for the pupils.

9. Carbon Crunch cards. Each team gets a different and random Carbon Crunch card. There are 40 in total (20 winning cards and 20 losing cards). March, June, September and December are always Carbon Crunch cards.
10. The game shows the scores for each team before showing the winner.

### The score sheet

1. You can also download a scoresheet for teams to fill in as they play the game. The maths for this is quite hard as there will be a mixture of plus and minus scores to add together.
2. Teams can ring answer A, B, C, or D on the score card and then write their scores in once it is given.
3. If the answer says “You **save** 30 kgCO<sub>2</sub>” then the score allocated is +30. If the answer says “You **use** 30 kgCO<sub>2</sub>” then the score allocated is -30. It is important that the teams write + or – on their score sheet. Unless the score is zero.
4. Note that we show on the score sheet that all months may have a question. This is to keep the excitement of a Carbon Crunch card appearing “randomly” during the game. When the Carbon Crunch card appears the pupils can just cross out that month on the scoresheet.
5. At the end of the game the total score from the *Months* is entered in the relevant *Total* box. This should be as a minus or a plus figure whichever it is. It’s usually a minus figure.
6. Scores from Carbon Crunch cards go in the boxes marked *Carbon Crunch* as they are won or lost. There are 5 spaces (even though only four happen during the game). At the end of the game the total score from the *Carbon Crunch* cards is entered in the relevant *Total* box.
7. The score for how much each dinosaur family uses is a minus score. It goes in the *Your Family* box and in the relevant *Total* box. (The number of members of the dinosaur family have already been accounted for in the score allocated to the family, so are just entered as they are).
8. The total (including the -2,000 for the public allowance) are all added together and put into the *Total kgCO<sub>2</sub> emissions* box. Again this is a minus or a plus figure. It is usually a minus figure.
9. That figure is then transferred into the *Total emissions* box at the top of the page. Remember to move the + or – as well.
10. The *Annual Allowance* of 10,000 kg CO<sub>2</sub>, plus or minus the *Total Emissions* gives the *Carbon Balance* in kgCO<sub>2</sub>.
11. The team with the highest Carbon Balance wins the game.

If you have any comments on the game or the instructions we would love to hear from you. Please email [cath.hassell@ech2o.co.uk](mailto:cath.hassell@ech2o.co.uk)

**We hope you enjoy playing Cut Your Carbon with your pupils!**

