

Climate Change Challenge

National Curriculum

English, speaking and listening

Maths- measuring and nets

Design and Technology – developing, planning and communicating ideas

Teacher's Notes

The amount of carbon dioxide we all produce as a result of the decisions we make is having a significant effect on climate change. The carbon dioxide acts like a thick, warm blanket surrounding the earth and prevents the radiation of heat into outer space. As a result, the earth is warming up. Scientists think that if we do nothing about the amount of carbon dioxide we are producing by the end of the century, temperatures will rise by about 6° Celsius. This would lead to catastrophic melting of the polar ice caps and a subsequent rise in sea levels. We need to reduce the amount of carbon dioxide we produce. We need to be more careful with the earth's resources and try to be less wasteful generally. If everyone in the world lived the way we do in the west we would need the resources of 3 and a half worlds.

Aim

- To make students aware of the various ways we can reduce the amount of waste we generate.
- The students work in groups or pairs to produce a board game.

Resources

White board, flip chart pens, pencils, marker pens, cardboard, plastic bottle tops, corks, wooden skewers or long spent matches.

Timing

1 hour +

Outcomes

Every student will have a clear understanding of what contributes more or less to climate change.

Differentiation

The development and design of the game naturally differentiates the ability groups. The more able students could be encouraged to think of their own factors that affect climate change and the average students could be given a partly completed table (p5) and the list (p3) if necessary. Less able students could be

given a blank template of the board e.g. see appendix 1 . More able students could be encouraged to develop it into a more complicated game.

Task

First brainstorm all the things your students can think of that contribute to climate change. Then ask the students to think of as many factors as they can that would have a smaller affect on climate change – see the list below to get you started. You can print off the worksheet if it helps.

Then explain the task: to develop a board game where those things that contribute less to climate change move you forward and those factors that have a large affect on climate change move you back.

Ask your students to plan it on paper first. It could be like snakes and ladders or a simple journey from one side of the board to the other. You could even use the recycle symbol drawn on a large piece of card and divided into steps. Limit the number of squares depending upon the age and ability of the students.

Once they are happy with their layout and are sure they don't have any dead ends (e.g. Pick up litter - move forward 2 but on the square they land on Leave TV on standby - move back 2), then they can proceed to making their own board game.

(Dice could be made using cube nets (see below) and thicker card or using a hexagon with a matchstick poked through it. Divide the hexagon into sections and write the numbers 1-6 on it. Take a piece of blu-tak or plasticine and poke a sharp pencil or a matchstick through the middle of the card shape).



Recycle

Answers

Does not affect climate	Affects the climate
Switch off the lights when leaving room	Buy roses from Kenya
Use fewer electric toys	Eat apples from New Zealand
Hang out the washing	Drive everywhere
Use the train more	Install oil central heating
Play more football	Fly everywhere
Use more economical cars	Throw away plastic bags
Share cars	Always buy new
Use wind power	Don't insulate the loft
Use solar power	Don't recycle
Burn logs	Open a window when the heating is on

Cycle to school	Burn coal
Walk	Leave the tap running
Eat less meat	Don't insulate the pipes
Use charity shops	TV on standby
Recycle	Leave lights on
Buy seasonal, local produce	Turn up heating
Wear a jumper	All waste goes into landfill
Grow your own vegetables	Buy potatoes from Peru

Use these ideas and any others you may have to develop a board game. Things that contribute less to climate change move you forward and things that contribute more to climate change move you back.

Climate Change Challenge: WORKSHEET

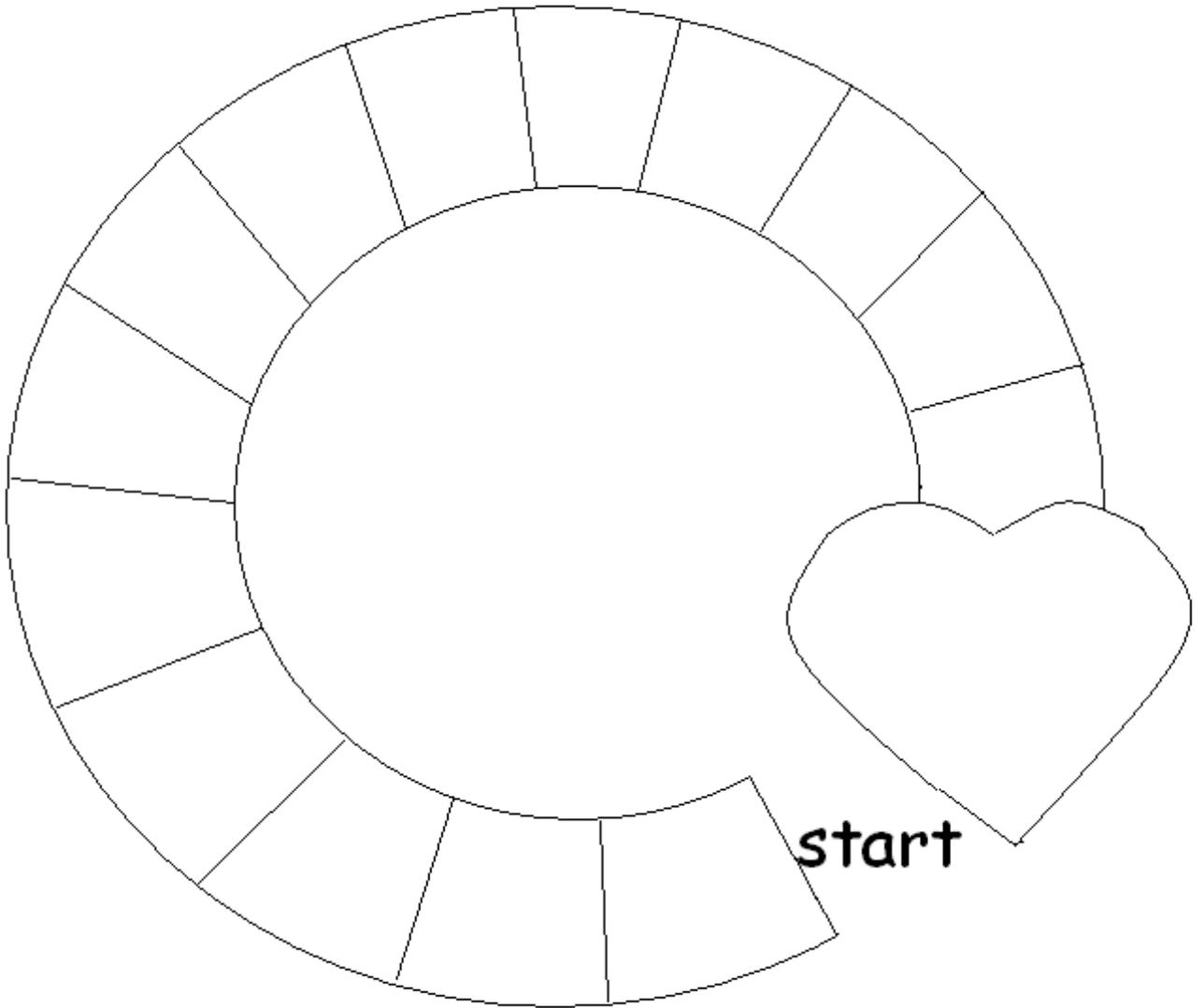
Can you arrange the following list into things that reduce your affect on the climate or actively affect the climate change? Can you say why?

- Eat apples from New Zealand
- TV on standby
- Drive everywhere
- Hang out the washing
- Install oil central heating
- Use the train more
- Fly everywhere
- Play more football
- Throw away plastic bag
- Switch off the lights when leaving room
- Buy roses from Kenya
- Use fewer electric toys
- Use smaller cars/ use more economical cars
- Always buy new
- Share cars
- Don't insulate the loft
- Use wind power
- Don't recycle
- Use solar power

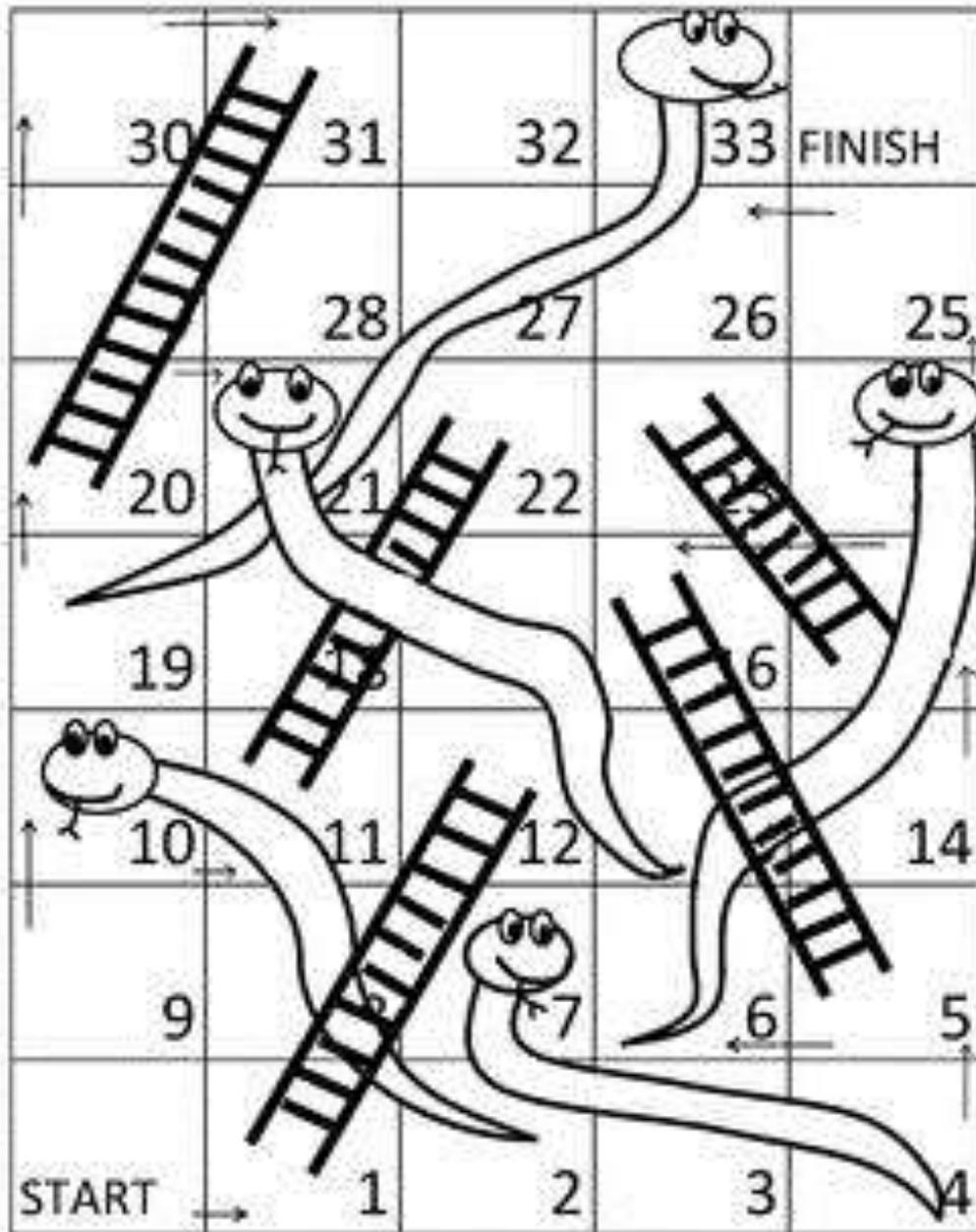
Open a window when the heating is on
 Burn logs
 Burn coal
 Cycle to school
 Leave the tap running
 Walk
 Don't insulate the pipes
 Eat less meat
 Leave lights

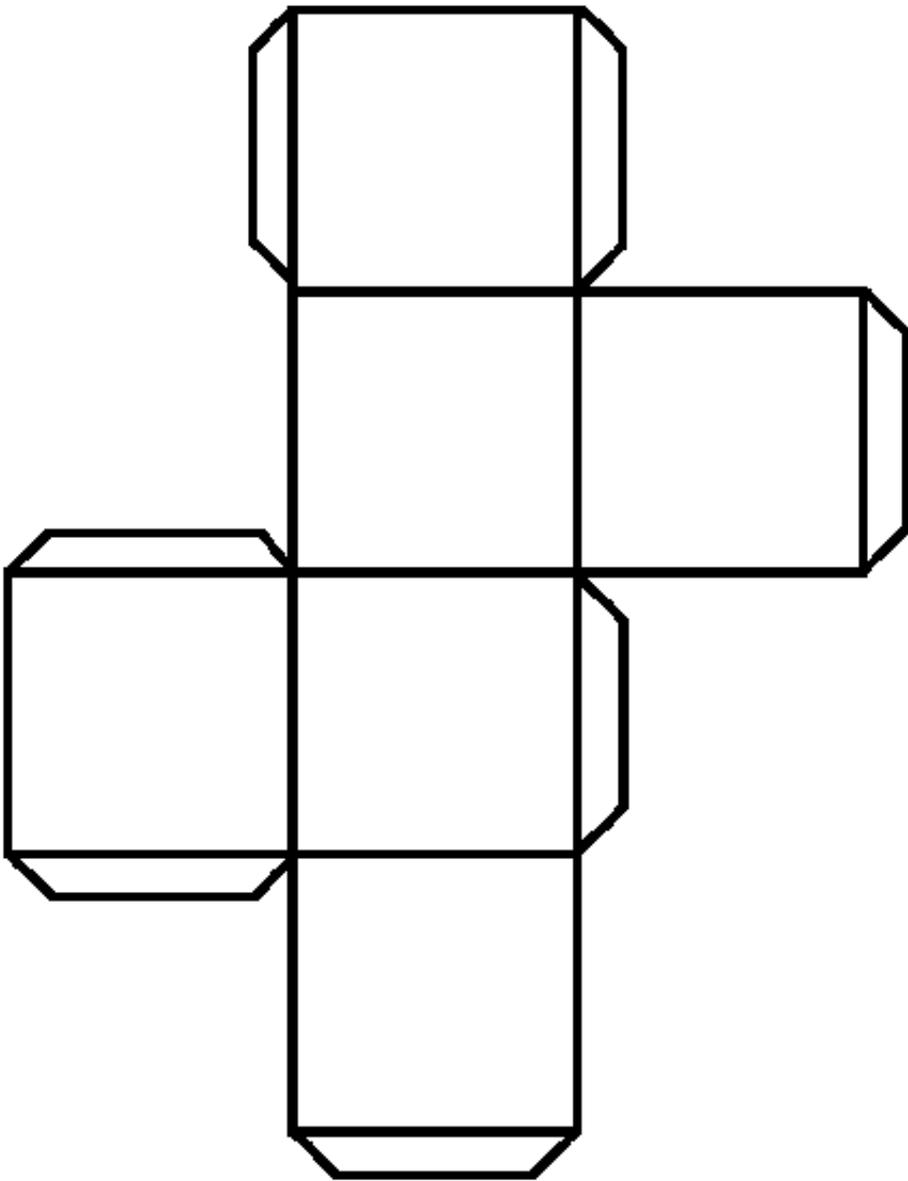
Does not affect climate	Affects the climate	Why?

Contributes less to climate change	Contributes more to climate change
Switch off the lights when leaving room	Buy roses from Kenya
Use fewer electric toys	Eat apples from New Zealand
Hang out the washing	Drive everywhere



SNAKES AND LADDERS





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