AGENTS OF CHANGE

MISSION LOG

A6: HEATING

THERMAL CONDUCTOR

Which material is the best conductor of heat? Plastic, wood or metal? Follow the instructions for the experiment below to find out.

Equipment:

- 1 Wooden Spoon
- 1 Plastic Spoon
- 1 Metal Spoon
- 3 Cups
- Butter
- Hot Water
- Measuring Jug

Method:

1) Scoop an even amount of butter onto each spoon.
2) Put each spoon into a cup, handle first, with the bowl part of the spoon (containing the butter) facing upwards.
3) Carefully fill each cup with the same amount of hot water - half way.
4) Touch the handle of each spoon. How does the spoon feel?
5) Record your observations. What is happening the butter?
6) Conclude your findings. Which material do you think is a good conductor of heat? How do you know this?

RETHINK FOOD

Observations:

Conclusions:

THERMAL INSULATOR

Which material is the best insulator of heat? Plastic, paper or metal? Follow the instructions for the experiment below to find out.

Equipment:

- 1 Styrofoam (plastic) Cup
- 1 Metal Cup
- 1 Paper Cup
- Hot Water
- Measuring Jug
- Stop Watch
- 3 Thermometers

Method:

- Fill each cup with the same amount of hot water using the measuring jug.
- Place a thermometer in each cup.
- Start your timer.
- Time how long it takes for the temperature to drop 10 degrees in each cup.
- Record your observations and conclusions in the space below.
- Remember the slower it takes for the temperature to drop, the better insulator the material is.

RETHINK FOOD

Observations:

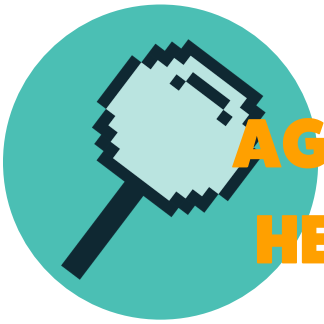
Conclusions:

RETHINK FOOD

WARM UP NOT WASTE UP

Use surplus vegetables to create a warm and nutritious vegetable soup, whilst preventing good food from going to waste – eating to save the planet. Use the findings from your experiment to decide which type of cup to serve your soup in. Which type of material cup will you choose to keep your soup warmer for longer? Use the space below to record your recipe and what cup to use.

RETHINK FOOD



AGENT A'S HEATING

CARBON FOOTPRINT	A measure of the amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organisation, or community.
CLIMATE CHANGE	The long-term shifts in temperature and weather patterns. These shifts can be natural. Rapid climate change is due to human activity through the burning of fossil fuels such as coal, oil and gas.
THERMAL CONDUCTOR	A material that allows heat to flow through it. Materials that are good conductors of heat include metal and water.
THERMAL INSULATOR	A material that does not allow heat to flow through it easily. Materials that are good insulators of heat include wood, plastic, rubber, and fabric. They are good at keeping heat out as well as in.
WEATHER-PROOFING	Making a building weatherproof means stopping draughts, leaks and heat loss in the winter. This is important in conserving energy.
INSULATING	We can use insulating to prevent heat loss in buildings, or we can wear insulating clothes to keep our bodies warm.
RENEWABLE ENERGY	A source of energy that comes from a natural source and can regenerate such as: solar power, wind power, and hydro power.
GREENHOUSE GAS EMMISION	The release of gasses into the earth's atmosphere, such as carbon dioxide, that contribute to the greenhouse effect.
DRAUGHT	A gap in a building that lets cold air in, often under the door.

RETHINK FOOD

MISSION SOLVED!

TEAM AGENT A

AGENT A'S VOCABULARY CHALLENGE
HEATING DECODED

Can you match the words to the correct definitions?

CARBON FOOTPRINT	A material that does not allow heat to flow through it easily. Materials that are good insulators of heat include wood, plastic, rubber, and fabric. They are good at keeping heat out as well as in.
THERMAL CONDUCTOR	A measure of the amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organisation, or community.
THERMAL INSULATOR	A material that allows heat to flow through it. Materials that are good conductors of heat include metal and water.
INSULATING	Stopping draughts, leaks and heat loss in the winter. This is important in conserving energy.
WEATHER-PROOFING	A gap in a building that lets cold air in, often under the door.
RENEWABLE ENERGY	A source of energy that comes from a natural source and can regenerate such as: solar power, wind power, and hydro power.
DRAUGHT	We can use insulating to prevent heat loss in buildings, or we can wear insulating clothes to keep our bodies warm.

RETHINK FOOD

MISSION SOLVED! TEAM AGENT A