Science week 3: Changing state

https://www.bbc.co.uk/bitesize/topics/zkgg87h/articles/zsgwwxs
Use this clip if you need reminding

This week I would like you to have some fun exploring which materials change state. Meaning which materials can change between solid, liquid and gas. Please don't worry about printing this out, you can record anything you do in the book that was sent home from school. The important thing is that you enjoy learning about what happens and send something in to show us.

1. **What states of matter were present in your breakfast this morning?**
   Draw a picture and label or make a list

2.TASK: Explore how different materials can change state
You can write explanations of what you find out, draw labelled diagrams and do some tests of your own and write up what you find out.Read the information below and use the powerpoint in the folder to help you. Watch the bite size clips for information and try out the quiz.

Where did my lolly go?

- What has happened to my lolly?- I left it in the kitchen and when I came back in this is all that was left of it. I know my Lolly was a solid!

I could hold it.
It kept its shape.
So what has happened?
What is left now it's not a solid?

- Can you write an explanation of what has happened. You could draw a diagram and label it to show what has happened.

You could carry out a practical enquiry if you have any ice at home or use this video to do some research.
Here is a bbc bite size clip to help you
www.bbc.co.uk/bitesize/topics/zkgg87h/articles/z9ck9qt

I want me lolly back. What can you do to help me get it back? Please try and find out using scientific enquiry. Try it out if you can!

- 3.**Can you find anything else at home that changes state?**

Can you draw some pictures to show some examples of changes of state and label the states of matter shown.
Can you say what has caused the change in state, is it **heating** or **cooling**?

- 4. **Carry out some practical enquiries**-

Here are some ideas of things you could try at home: See the investigation sheets in the folder 'Melting Chocolate Investigation'

Materials you could test:
Ice
Butter
Chocolate melting investigation (in the folder there is an example investigation to look at, you can use this for ideas if you want to but don't need to print it out)

Things to test: (or come up with your own)
Where does it melt the quickest?
How does temperature affect how quickly it melts?
Which solid melts quicker?
What is the best temperature for chocolate to change state?

Ways to test:
Hold in your hand
Place on a plate in the window
Place on a foil boat in water at different temperatures (freezer, fridge,cold, room temperature, warm from the tap)
Put it in your hand and say the alphabet 5 times

For your information:

Solid	Liquid
Keeps its shape	Spreads out to fill the bottom of a container
Cannot flow	Can flow
Has a fixed volume	Has a fixed volume
Cannot be compressed	Cannot be compressed easily
Cannot move through it	Can move through it
Particles packed close together and can only vibrate	Particles can move or slide over each other
Feels hard	Feels wet
Maintains its shape and its volume	Maintains its volume but not its shape