

Changing States

Teachers' notes:

These activities originally devised by Steve Cooke are planned to accompany practical work on evaporation, condensation, melting and freezing.

The examples are printed on card, cut up and pupils can sort them onto the grid. Please send other examples back to us for inclusion on the grids. We are also putting together a set of pictures to go with the examples, but these will only be available by post.

The "when you heat/when you cool" cards should be chopped up and then the sentences can be put back together correctly. Again pictures would make this more accessible.

The webaddress for this activity is:

<<http://collaborativelearning.org/changingstates.pdf>>

COLLABORATIVE LEARNING PROJECT

Project Director: Stuart Scott

Supporting a cooperative network of teaching professionals throughout the European Union to develop and disseminate accessible teaching materials in all subject areas and for all ages.

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BRIEF SUMMARY OF BASIC PRINCIPLES BEHIND OUR TEACHING ACTIVITIES:

The project is a teacher network, and a non-profit making educational trust. Our main aim is to develop and disseminate classroom tested examples of effective group strategies across all phases and subjects. We hope they will inspire you to use similar strategies in other topics and curriculum areas. We run teacher workshops, swapshops and conferences throughout the European Union. The project publishes a catalogue of activities plus lists in selected subject areas, and a newsletter available by post or internet: "PAPERCLIP".

*These activities were influenced by current thinking about the role of language in learning. They are designed to help children learn through talk and active learning in small groups. They work best in mixed classes where children in need of language or learning support are integrated. They are well suited for the development of speaking and listening. They provide teachers opportunities for assessment of speaking and listening and other formative assessment.

*They support differentiation by placing a high value on what children can offer to each other on a particular topic, and also give children the chance to respect each other's views and formulate shared opinions which they can disseminate to peers. By helping them to take ideas and abstract concepts, discuss, paraphrase and move them about physically, they help to develop thinking skills.

*They give children the opportunity to participate in their own words and language in their own time without pressure. Many activities can be tried out in mother tongue and afterwards in English. A growing number of activities are available in more than one language, not translated, but mixed, so that you may need more than one language to complete the activity.

*They encourage study skills in context, and should therefore be used with a range of appropriate information books which are preferably within reach in the classroom.

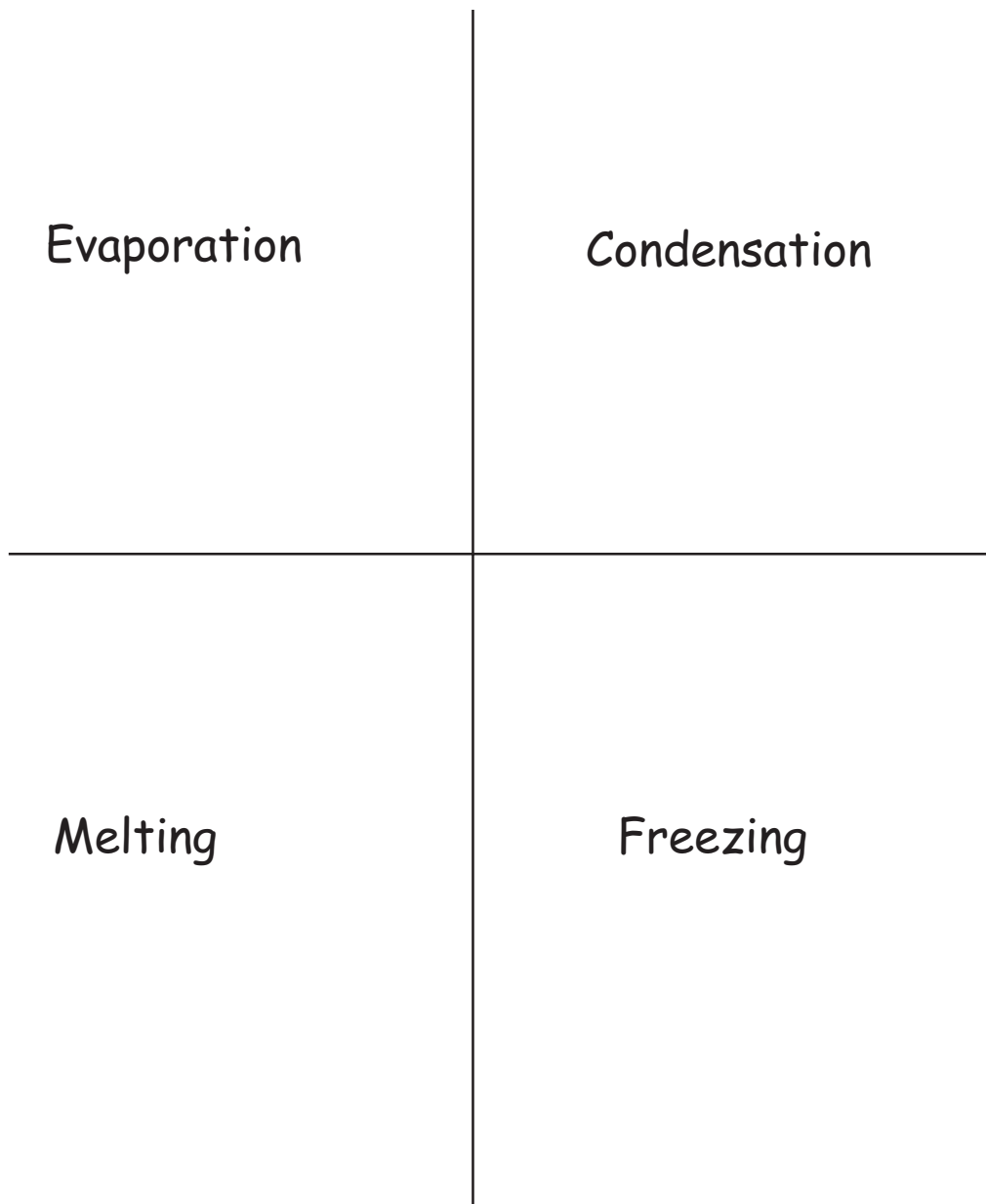
*They are generally adaptable over a wide age range because children can bring their own knowledge to an activity and refer to books at an appropriate level. The activities work like catalysts.

*All project activities were planned and developed by teachers working together, and the main reason they are disseminated is to encourage teachers to work effectively with each other inside and outside the classroom. They have made it possible for mainstream and language and learning support teachers to share an equal role in curriculum delivery. They should be adapted to local conditions. In order to help us keep pace with curriculum changes, please send any new or revised activities back to the project, so that we can add them to our lists of materials.

Changing States

Instructions:

Look at the cards. Where do they fit on the grid?



Changing states cards - print on card and cut up.

<p>When you put an orange drink in the freezer it goes solid.</p>	<p>When you boil water it turns to water vapour.</p>	<p>When you breathe on a mirror it mists up.</p>	<p>When it warms up the snow becomes slushy.</p>
<p>On a cold day you can see your breath.</p>	<p>If you leave some chocolate in your pocket on a hot day it gets messy.</p>	<p>If you put some cooking fat in the fridge it becomes hard and white.</p>	<p>When you have a shower, the mirror steams up.</p>
<p>In August the wheat turns from green to yellow - it ripens.</p>	<p>In Egypt mummies have stayed preserved for thousands of years.</p>	<p>When you have made a pot out of clay, it dries out.</p>	<p>You can make soup thicker by boiling it.</p>
<p>On some mornings the grass is wet with dew.</p>	<p>Some advertisers use a small plane to write in the sky.</p>	<p>The Dead Sea is getting saltier.</p>	

Changing states cards - print on card and cut up.

When you hang the washing outside, it dries.	When you leave ice-cream out of the freezer, it becomes soft.	When you boil rice, little drops of water form on the inside of the kitchen window.	After it rains, the puddles in the playground dry up.
When you use a hair dryer, your hair becomes dry.	When you burn a candle, the wax runs down the candle.	When water vapour rises from the sea it turns into a cloud.	When you write with a fountain pen, the ink dries.
When it's cold, car windows get ice on the outside.	If you leave the lid off the Tippex, it dries up.	A cold can of cola from the fridge has tiny drops of water on it.	If you put an ice cube in a drink it disappears.
When you lay fresh apricots in the sun they dry out and won't go mouldy.	You can boil down maple tree sap to make maple syrup.	In the summer, when ponds dry up, you can see cracks in the mud.	They can extract sugar from sugar beet in a factory.
Icebergs sometimes float south towards warmer seas and slowly get smaller.	Seeds dry out so that they will survive through the winter.	When you iron the damp clothes, they dry out flat.	You can find limescale on the bottom of the bath.
You can hang up herbs and flowers and then they can be used later	In the south of France and Spain they extract salt from the sea	You don't need to dry the washing up. If you leave it on the rack it just dries.	You can dry your wet hands under an electric handdryer

Changing states cards - print on card and cut up.

When you heat a solid...	When you heat a liquid	When you cool a gas.
...it melts...	...it evaporates...	...it condenses...
...and becomes a liquid.	...and becomes a gas.	..and becomes a liquid.
This process is called melting.	This process is called evaporation.	This process is called condensation.
When you cool a liquid..		
...it solidifies...		
...and becomes a solid.		
This process is called solidification		