

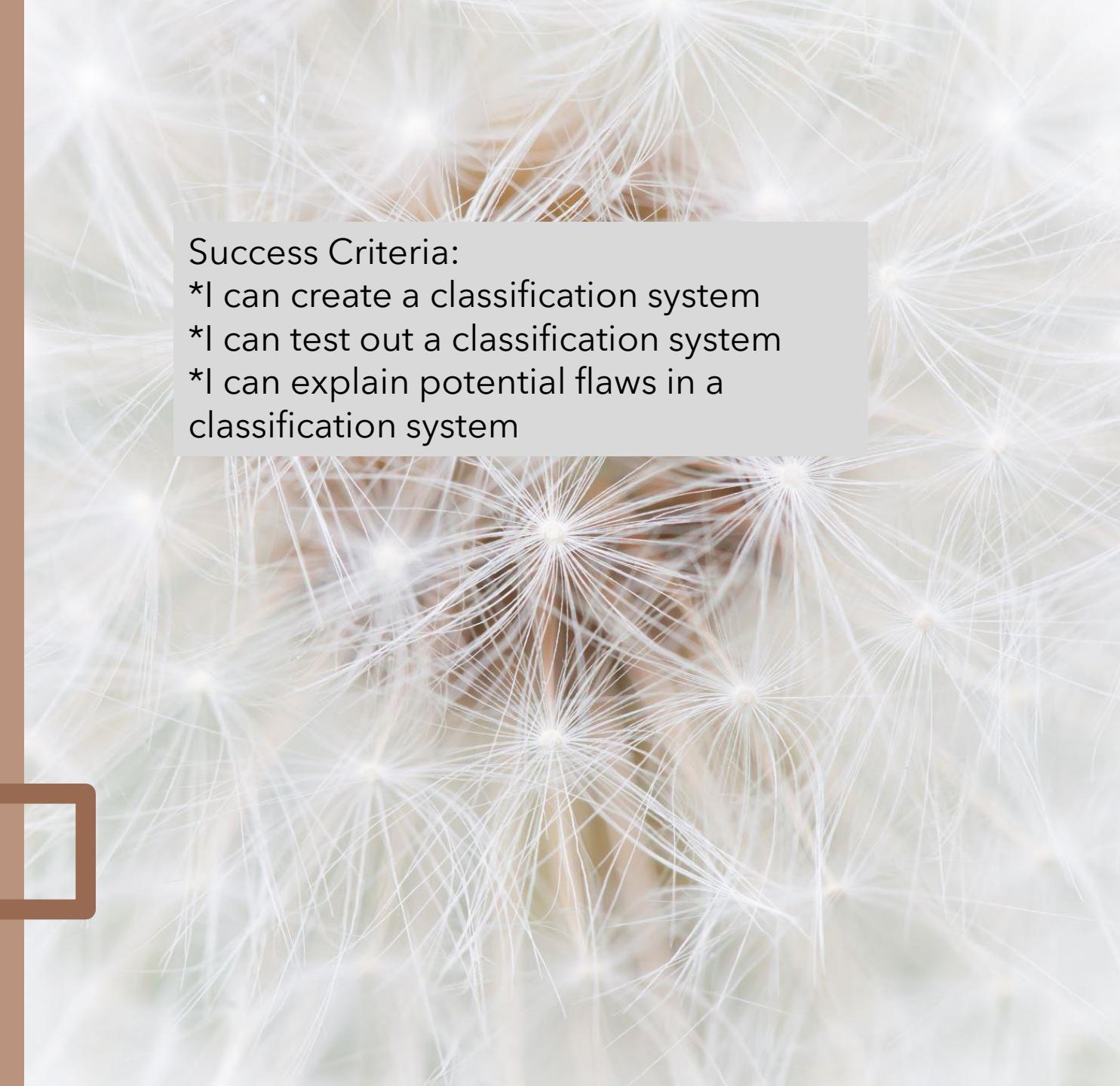
Living things in their habitats

Lesson 4:
I can develop classification
keys

I can test out classification
keys, identifying potential
flaws

Success Criteria:

- *I can create a classification system
- *I can test out a classification system
- *I can explain potential flaws in a classification system



Let's revisit our investigation from last week.

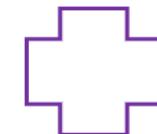
What Makes Mould Grow?

Set up your investigation.

Write out your method. Include all of the key parts into your method.

Today, you will need to:

- Create your question
- State your hypothesis (this is your prediction) (I think....)
- Record your procedure (these are your steps)
- Set up the experiment using 2 slices of bread and 2 plastic bags.
- Record your first observation on the next slide.



Hypothesis

Scientific Question: What are you going to find out?



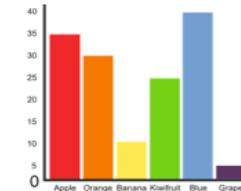
Prediction

What do you think will happen? Why?



Equipment

What will you need to test your hypothesis?



Method (with a diagram)

How are you going to carry out your investigation?

Results

Time it, measure it, observe it. Record what you have found. Use a table, bar chart, line graph?



Conclusion

Look at your hypothesis, what have you discovered? Use your results to support your answer. How could you do it better next time? Did anything surprise you? Why?

What have you discovered from your investigation?

- You should have been recording your results all week, including drawings and diagrams of what you seen.
- Now it is time to complete your investigation by writing your conclusion.



Results

Time it, measure it, observe it. Record what you have found. Use a table, bar chart, line graph?

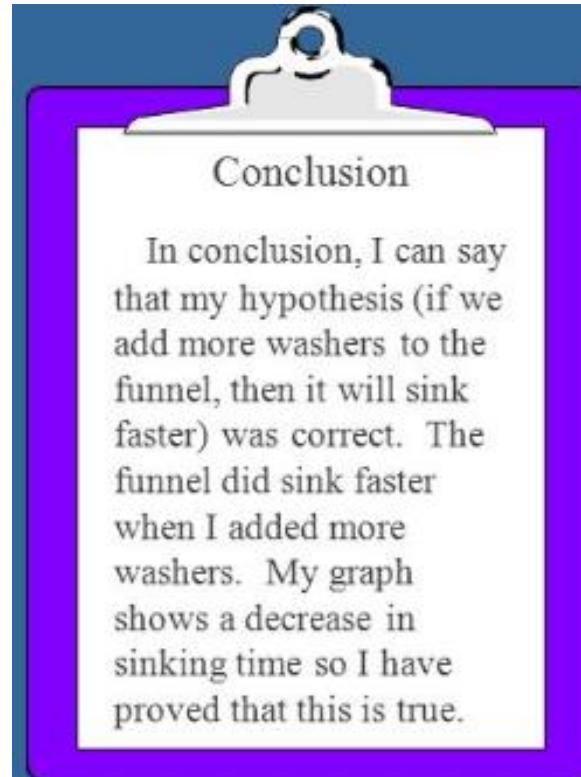
Conclusion

Look at your hypothesis, what have you discovered? Use your results to support your answer. How could you do it better next time? Did anything surprise you? Why?



Conclusion:

- Your conclusion is the answer you have found to the question you posed: What makes mould grow and is based answers your hypothesis.



- In conclusion, I found that



Conclusion

Look at your hypothesis, what have you discovered? Use your results to support your answer. How could you do it better next time? Did anything surprise you? Why?



Key vocabulary for this lesson:

Classification, kingdom, phylum, class, order, family, genus, species, Linnaeus, branching classification key, opinion, similarities, differences, group, observations, support, refute

What is classification?

STOP!

Do not move onto the next slide.

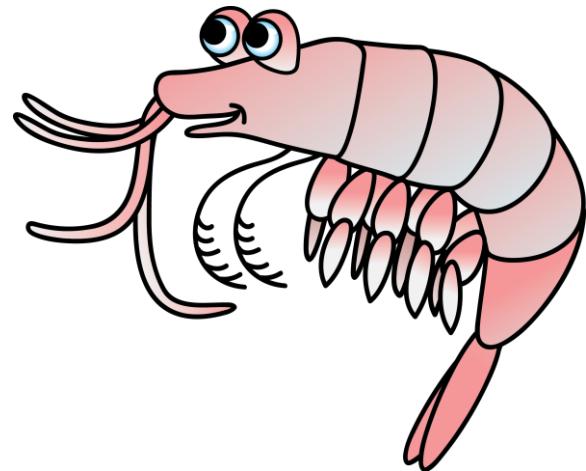
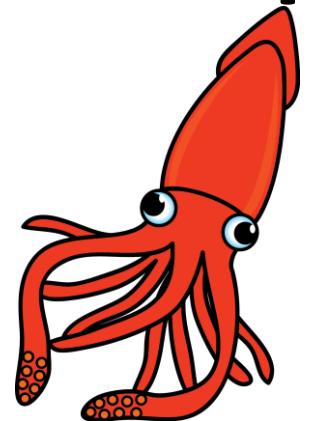
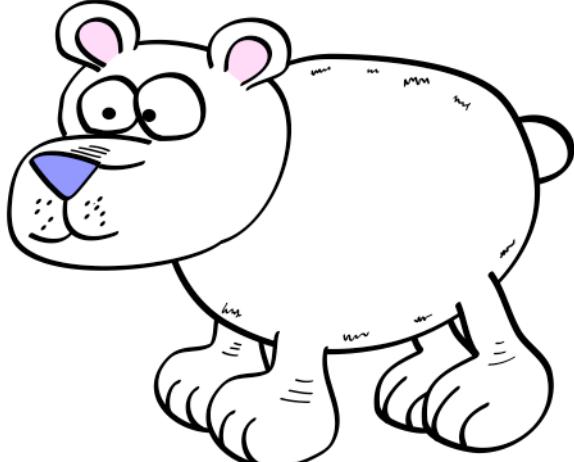
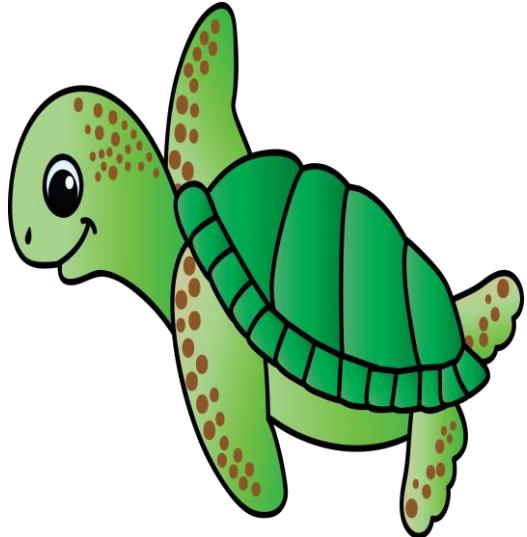
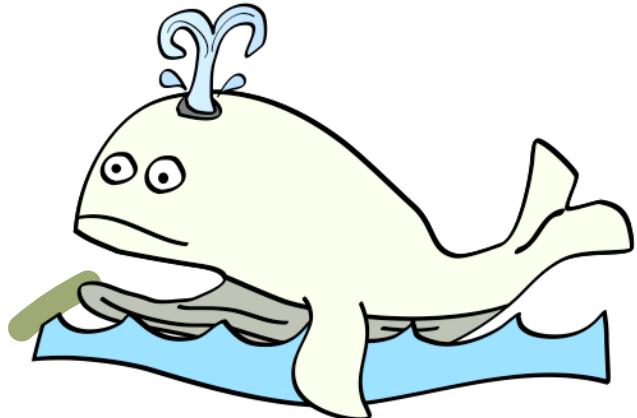
Write down what classification is. Write a definition.

What is classification?

How did you do?

To classify something means to put it in a group that makes sense.

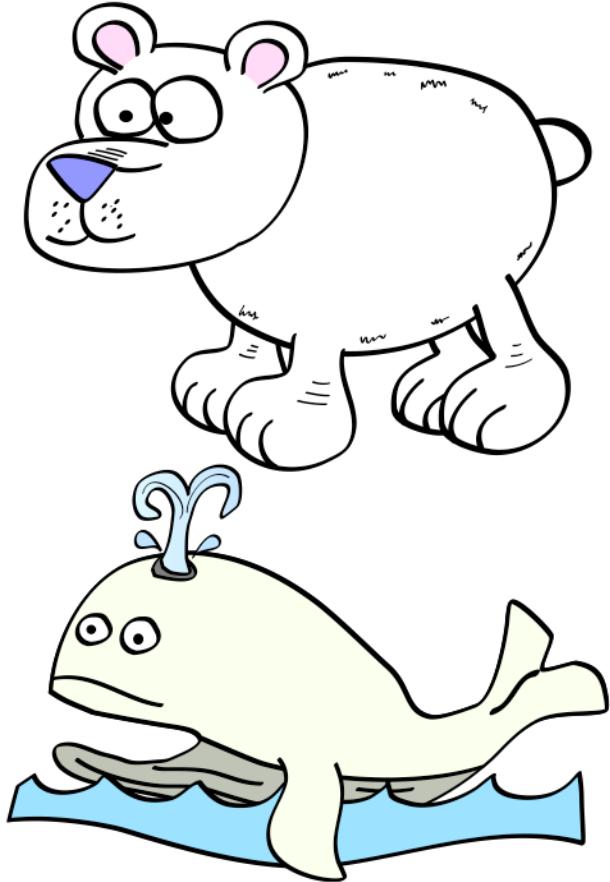
To classify something means to put it in a group that makes sense.



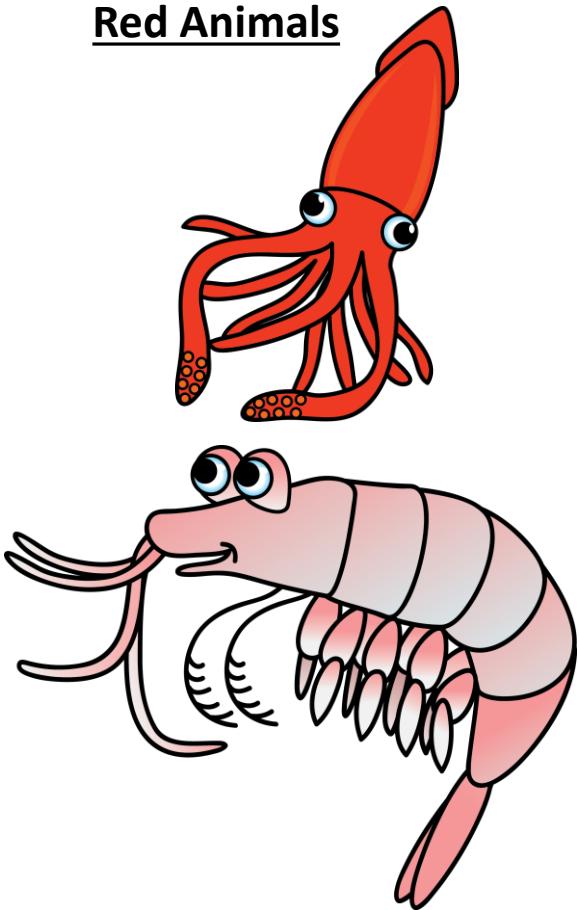
Put these animals into groups.
Make sure you can explain why you put them in
these groups.

You could have grouped them like this.

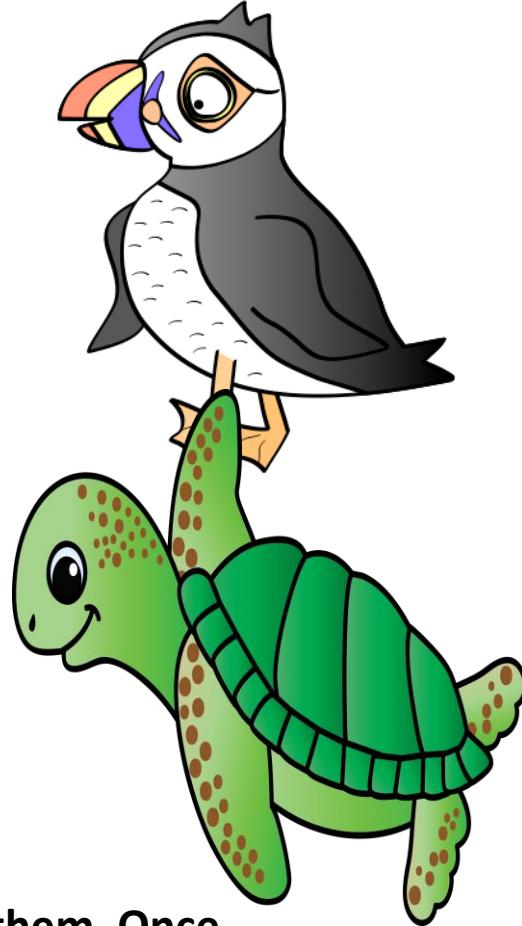
White Animals



Red Animals

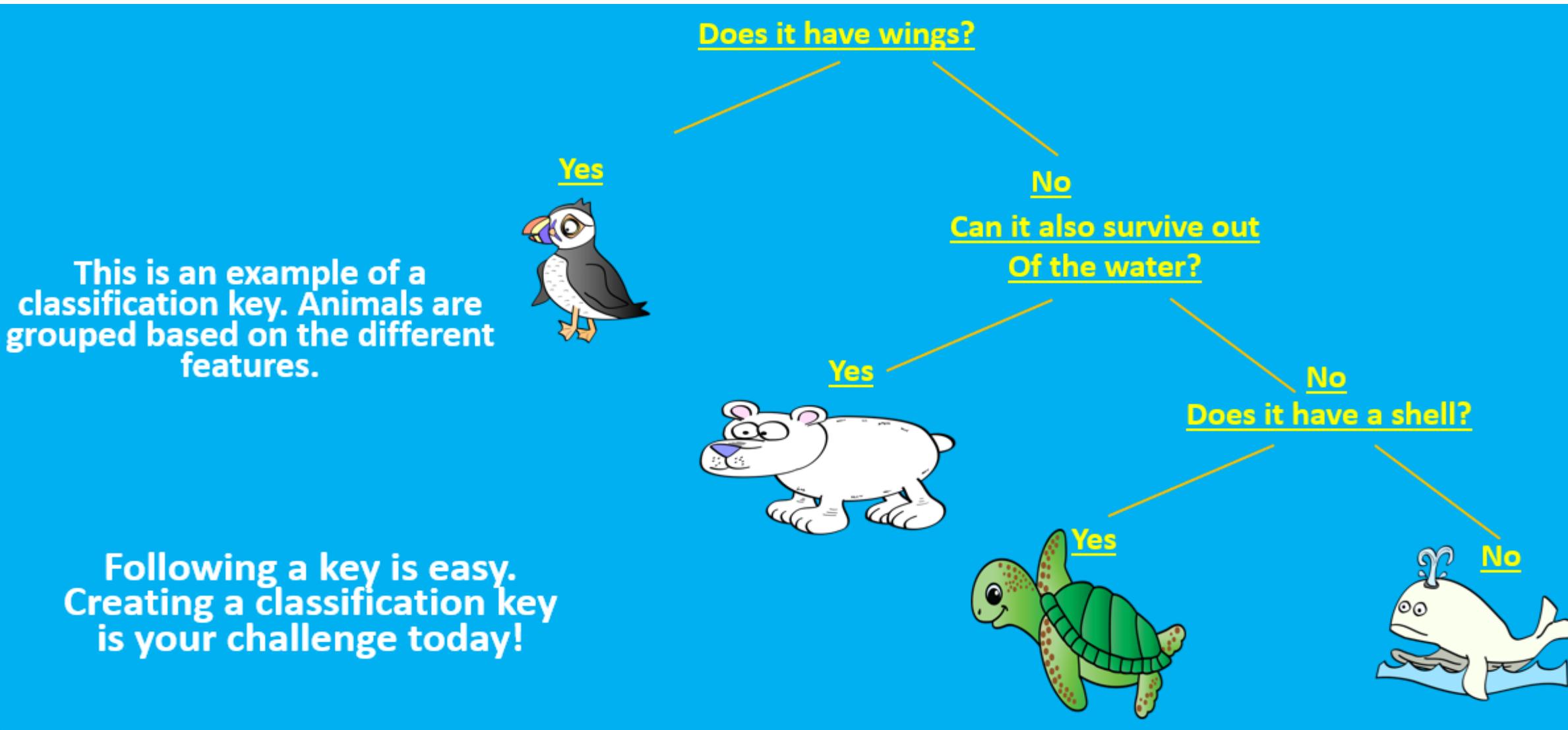


Multicolored Animals



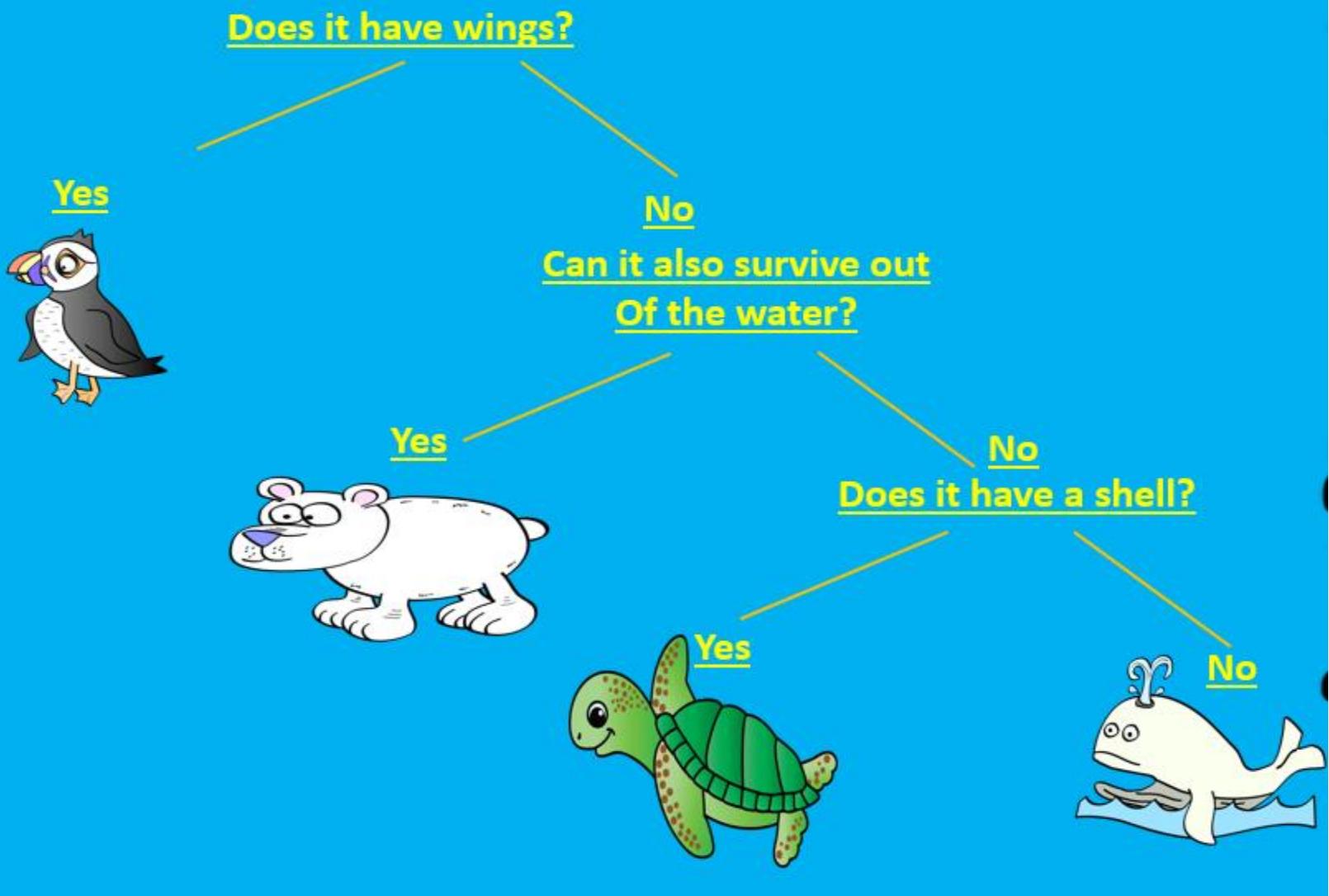
There is no right way to group them. Once you can explain why you put them in these groups, it is correct.

A classification key is used to determine which group an animal or object belongs to based on its features.



The first question should always be a strong one so that you can separate the creatures or objects easily.

As there was only one bird, this question grouped the animals straight away.



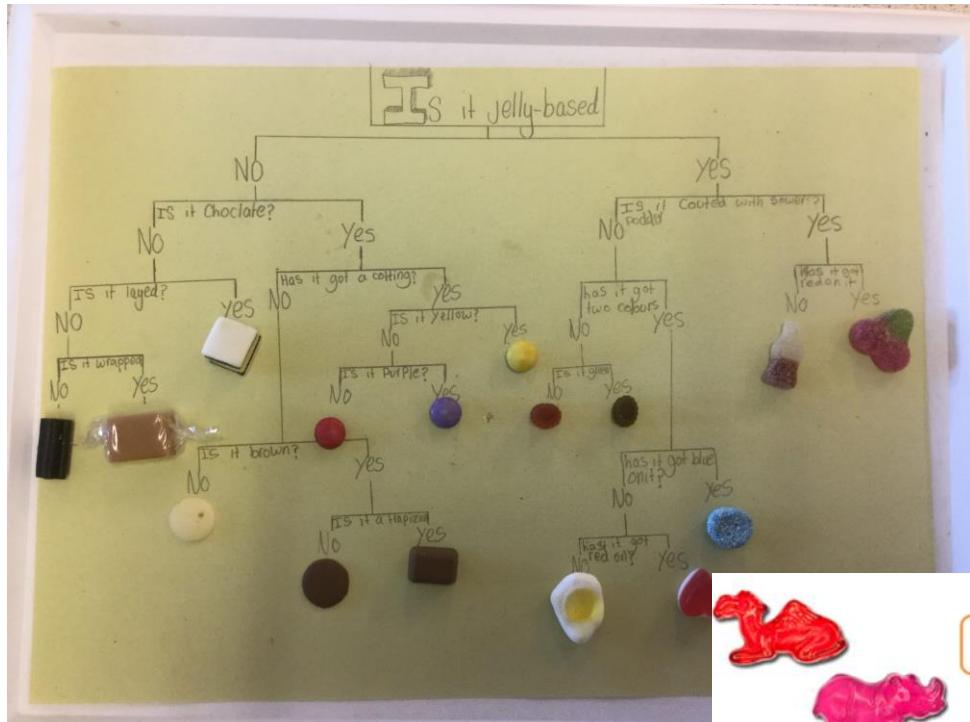
Your challenge today is to group sweets using a classification key!

Choose a bowl of sweets that you will classify.
Begin by creating questions.

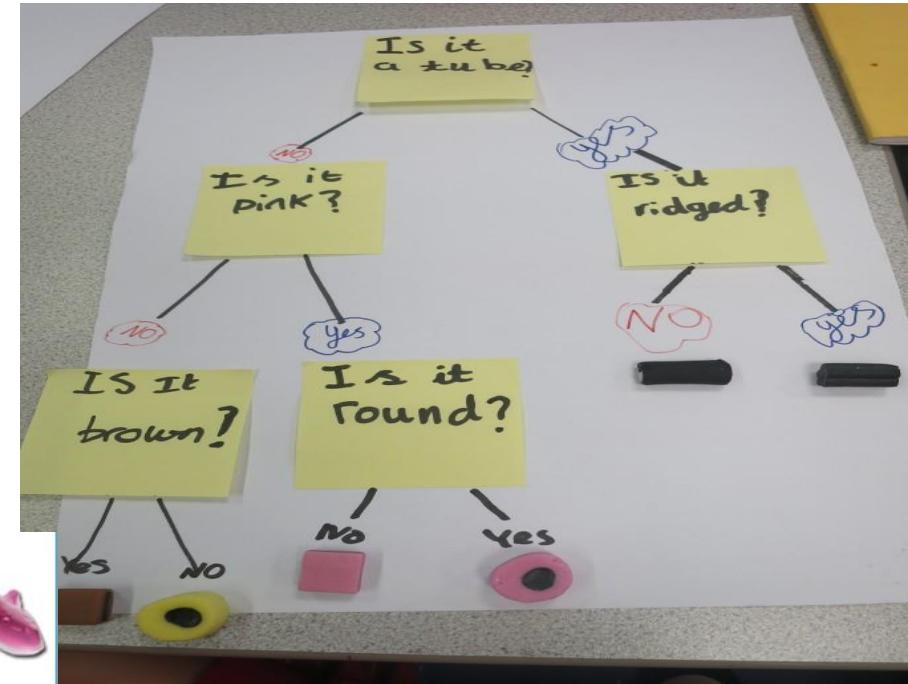
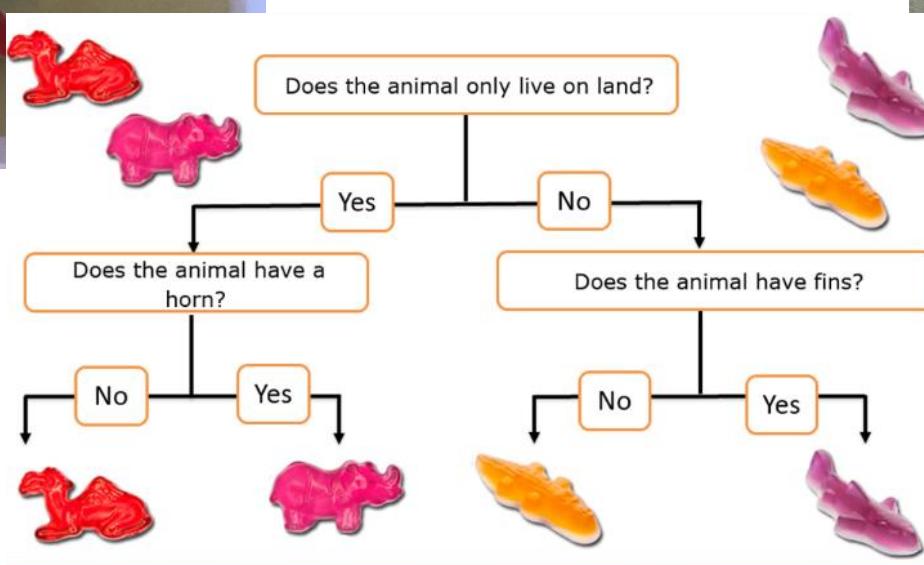


Your challenge today is to group sweets using a classification key!

Now that you have a question, create a classification key



Challenge: How many different ways can you classify?



Take a picture if you can for when you submit your work to 'One and only Ordinary Book that opens for Extraordinary Work'!

Get a bag of mixed sweets or look in your cupboard at home. What can you classify?



If you cannot get sweets, or cannot find anything in your cupboard, do not worry. On the next slides are other objects you can classify.

Birds, Bees and Butterflies.

Choose one (Birds or bees or butterflies) and think about questions to use to classify them.
Cut them out to move them around your classification key.

Challenge: How many different ways can you classify?



Bullfinch



Woodpigeon



Blackbird



Chaffinch



Great tit



Blue tit



Grey heron



Puffin



Magpie



Yellowhammer

Birds, Bees and Butterflies.

Choose one (Birds or bees or butterflies) and think about questions to use to classify them. Cut them out to move them around your classification key.

Challenge: How many different ways can you classify?



Marbled white



Red admiral



Common blue



Small blue



Clouded yellow



Large white



Swallowtail



Orange tip



Peacock



Monarch

Birds, Bees and Butterflies.

Choose one (Birds or bees or butterflies) and think about questions to use to classify them.

Cut them out to move them around your classification key.

Heath bumblebee <i>Bombus jonellus</i>				Red-tailed bumblebee <i>Bombus lapidarius</i>		
						
Male	Worker	Queen	Face	Male	Worker	Queen
Tree bumblebee <i>Bombus hypnorum</i>				White-tailed bumblebee <i>Bombus lucorum</i>		
						
Male	Worker	Queen		Male	Worker	Queen

Buff-tailed bumblebee <i>Bombus terrestris</i>	Common carder bee <i>Bombus pascuorum</i>				
					
					
					
Male	Worker	Queen	Male	Worker	Queen
Early bumblebee <i>Bombus pratorum</i>	Garden bumblebee <i>Bombus hortorum</i>				
					
					
					
Male	Worker	Queen	Male	Worker	Queen
					

Challenge: How many different ways can you classify?

How have you done?

- Remember to take a photo of your work for the extraordinary book.
- How many different ways were you able to classify?
- This is how systems often evolve in science, where different scientists have different ideas, arguments and opinions as well as new evidence or techniques.
- This is an important part of science as when scientists then share their ideas they may find flaws in one another's work through what is called 'peer review'.
- There is no one right way to classify. Justify your reasons and explain why you have classified the way you have.