Natural Sciences and Technology

Term 2

Topic: Solids, liquids and gases

Date: _____ (COPY INTO WORKBOOK)

What is a food web?

When we join many different food chains in an ecosystem together, we get a food web. A food web consists of many thousands and thousands of food chains that are connected to each other.

There are different levels of consumers in an ecosystem:

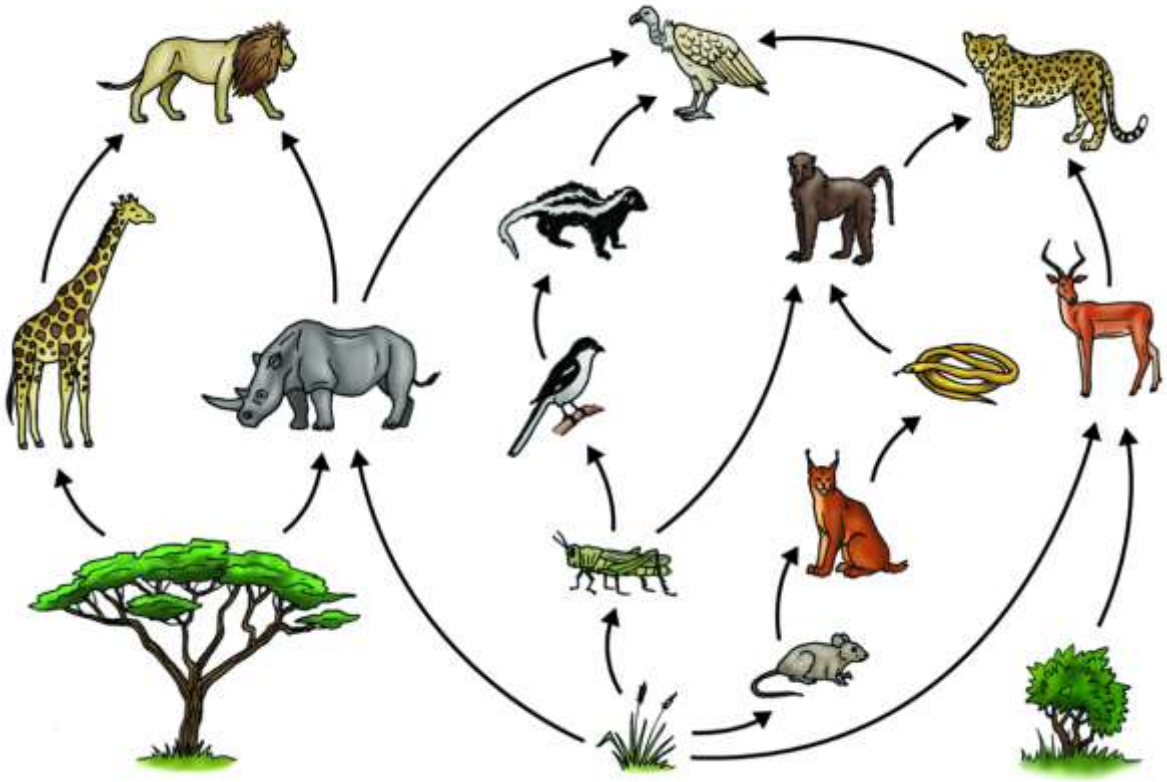
Primary consumers: are the herbivores which eat the plants, such as the mice and grass in a savannah food web.

Secondary consumers: eat primary consumers.

Tertiary consumers: eat the secondary or primary consumers.

Activity: (DO NOT DRAW OUT EXAMPLE)

Below is an example of a food web in a savannah ecosystem:



1. Identify the producers and the consumers. (fill in with pencil on the diagram)

2. Draw an example of a food web. Use the following list of organisms to draw your food web: grass, small plants, seeds, beetle (herbivore), butterfly, tree frog, rabbit, mouse, seed-eating bird, an insect eating bird, snake, fox and owl.

Term planner

Week	Topic
1	Solids, liquids and gases
1 – 2	Mixtures
3 – 4	Solutions as special mixtures
5	Dissolving
6 – 7	Mixtures and water resources
8 – 9	Processes to purify water

Date: _____ Term 2 (COPY INTO WORKBOOK)

Solids, liquids and gases.

Fact file:

Microscopic: very small, can only be seen through a microscope.

Vibrate: small movements back and forth.

Recap:

Activity 1:

1. Name the three states of material. (3)
2. When material changes state from a solid to a liquid it _____. (1)
3. When a material changes freezes/ solidifies it changes from a _____ to _____. (2)

Date: _____

Solids, liquids and gases

Recap:

Property	Solids	Liquids	Gases
Visibility (to see)	Easy to see.	Most liquids are easy to see.	Not easy to see.
Shape	Have definite shape.	Have no definite shape.	Have no definite shape.
Space	Takes up definite space.	Takes up definite space.	Takes up all space available.
Flow (movement)	Do not flow.	Can flow.	Can flow.
Examples	Rocks, chairs, houses.	Water, milk, orange juice.	Helium gas in balloons, air outside.

All matter is made from small particles (atoms and molecules). These particles are too small to see with a microscope and very hard to think about. Therefore, we classify these particles in three categories, tightness of particles, can be particles, be compressed, and the position of the particles. The classification of solids, liquids and gases according to their particles are:

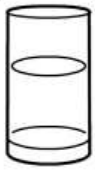
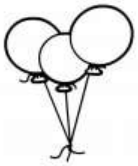
Particle classification	Solids	Liquids	Gases
Tightness	Particles are packed tightly together.	Particles are very close together, but there are small open spaces (vacuums) in between.	Particles are far apart, there are many big vacuums in between the particles.
Compress	Cannot be compressed.	Cannot be compressed.	Can be compressed because of empty spaces.
Position	Particles have fixed positions, they cannot move from their positions.	Particles do not have fixed positions, they are always moving around.	Particles move freely, the particles spread out in the space provided to them.

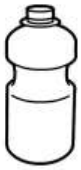
Activity 2:

Draw the particles inside:

Solid	Liquid	Gas

The table below contains a list of containers. Indicate what material is inside the container and also what type of material can be found on the inside:

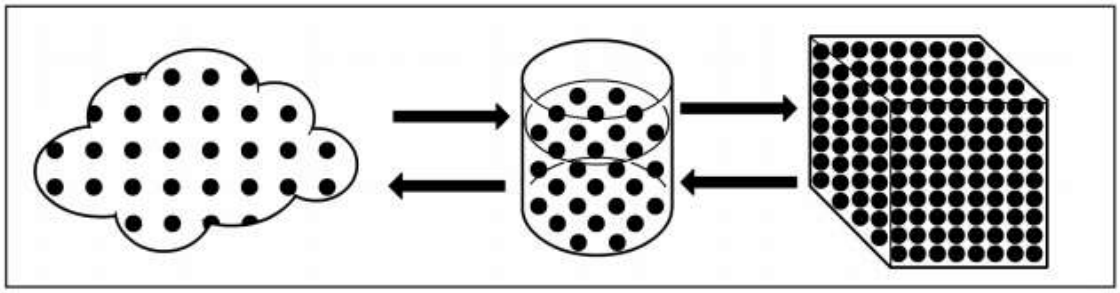
Container	What material is inside?	Is the material a solid, liquid or gas?
		
		
		

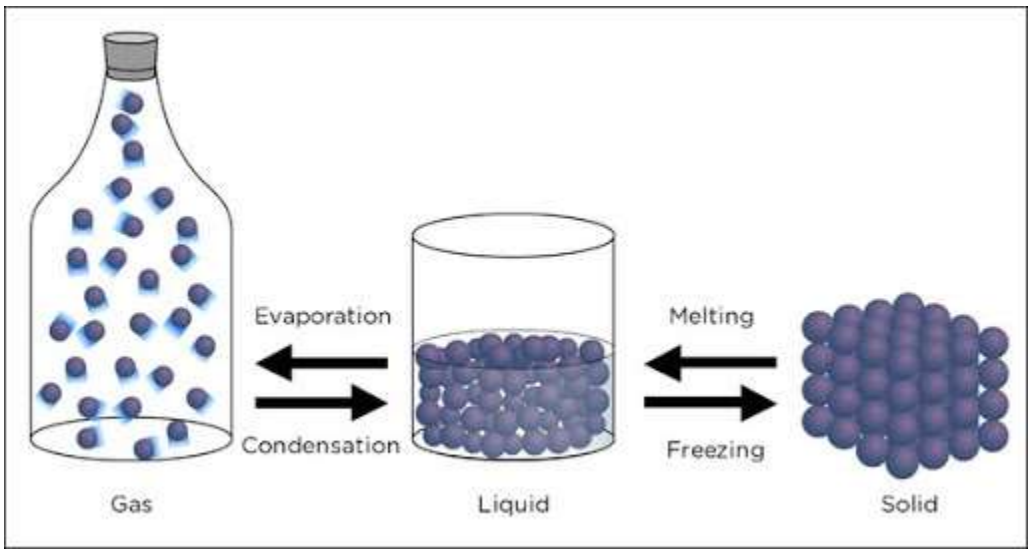
Container	What material is inside?	Is the material a solid, liquid or gas?
		
		

Date: _____

The states of water

Here are some examples of the different states of water.





Activity 3:

1. What do we call the solid state of water?
2. What do we call the liquid state of water?
3. What do we call the gas state of water?
4. What do we call the process of ice changing to liquid water?
5. What do we call the process of liquid water changing to ice?
6. What do we call the process of liquid water changing to water vapour?
7. What do we call the process when water vapour changes to water?
8. Do the particles in the ice change when the ice melts? Explain.
9. If ice and liquid water have the same particles, why do ice and liquid water have different properties? (Ice is solid and water is liquid).