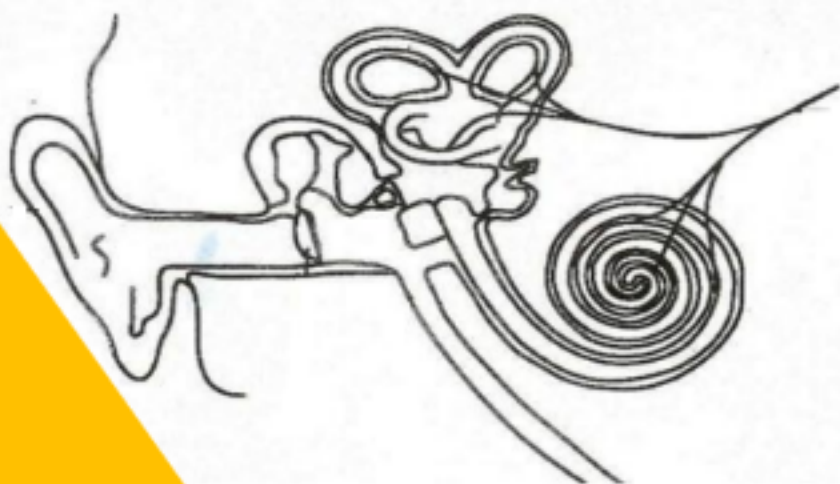


# SUREKEY

2022 – PLE MOCK EXAMINATION

**INTEGRATED SCIENCE**

**GUIDE**



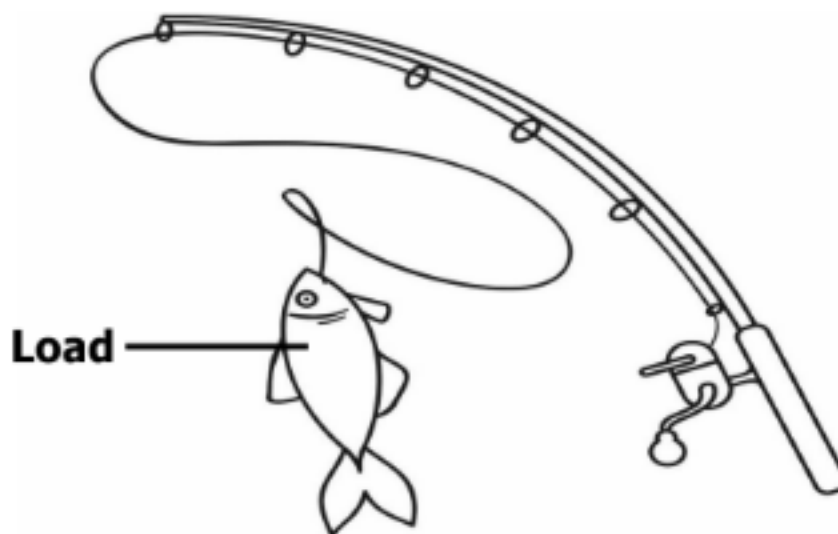
**OFFICIAL MARKING GUIDE**

## SECTION A: 40 MARKS

Questions **1** to **40** carry **one mark** each

1. Name the element of weather that helps crop farmers to carryout winnowing.
  - **Wind. (Reject wind blow/blowing wind because all wind blows and note that wind is moving air)**
2. Mention any **one** fungal disease that affects the human skin.
  - **Ringworm**
  - **Dhobi itch**
  - **Athlete's foot. (*Reject eczema*)**
3. How is culling important in poultry management?
  - **Reduces spending on unproductive birds**
  - **It reduces production costs**
  - **It controls the quality of breeds**
  - **It controls some poultry diseases**

The diagram below is of a **fishing rod**. Study and use it to answer questions **4** and **5**.



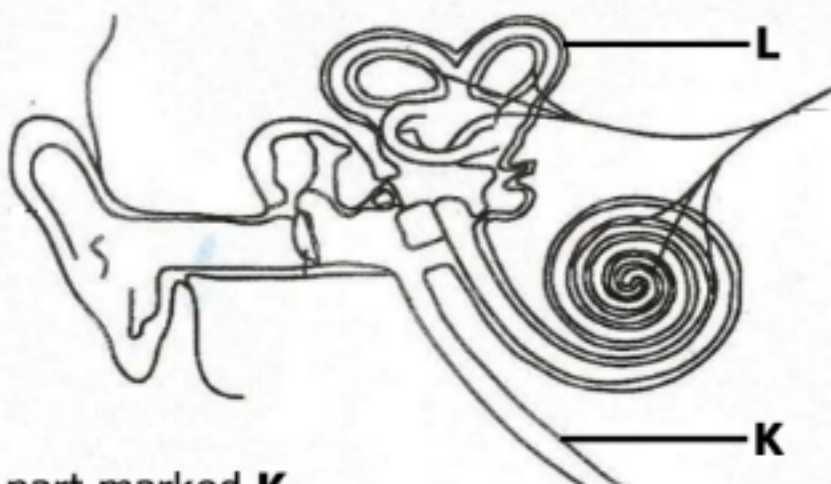
4. Name the class of levers to which the fishing rod belongs.
  - **Third class levers/ 3<sup>rd</sup> class levers**
5. On the diagram above, label the load.
6. Why is it not advisable to keep potted plants in a room where people live?
  - **Potted plants compete with people for oxygen**

7. Give any **one** disorder of the human digestive system.
  - **Constipation**
  - **Indigestion**
  - **Vomiting**
  - **Bloating**
  - **Intestinal Obstruction**

*(Reject: Heartburn// chocking// diarrhea)*
8. Why is the filament of an electric bulb coiled?
  - **To increase electrical resistance**

*(Reject :To increase electric resistance)*
9. In which part of an onion plant is food stored?
  - **Fleshy leaves**
  - **Storage leaves**
10. State any way in which the fish benefits from its slippery body.
  - **It enables the fish to escape from its predators**
  - **Enables fish to overcome viscosity friction in water when swimming**
11. How is the function of the cotyledon in the maize grain different from that in a bean seed?
  - **The cotyledon in a maize grain absorbs food from the endosperm and Supplies it to the embryo while the cotyledon in a bean seed Store food for the growing embryo.**
12. Give any**one** way in school children benefit from a school garden.
  - **They get food**
  - **They learn farming skills**
  - **For practical studies**
13. What is the importance of giving a person who has drunk paraffin fluid like milk to drink?
  - **To dilute poison**
  - **To weaken poison**
14. State the best way of preventing childhood immunisable diseases.
  - **Through immunization**

The diagram below shows **a human ear** .Study and use it to answer questions **15** and **16**.

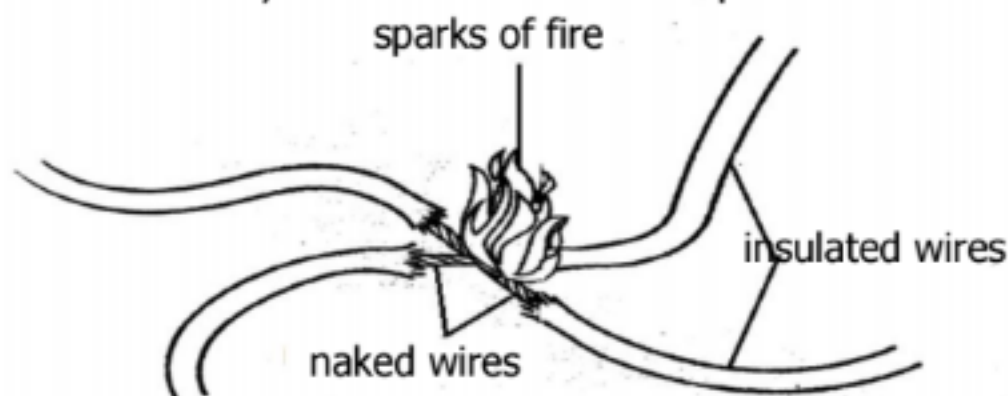


15. Name the part marked **K**.
  - **Eustachian tube**
16. State the function of the part marked **L** on the human ear above.
  - **For body balance**
  - **Maintains the body balance**
17. Which disease vector spreads river blindness to people?
  - **Simulium fly //Black fly //Jinja fly //Gnat fly //Simulid fly**
18. How does painting help to prevent a metallic object from rusting?
  - **Paint prevents contact of oxygen and water on the metal**
19. State any **one** way of increasing the volume of blood in the human body.
  - **Through blood transfusion**
  - **Feeding on food rich in iron**
  - **Taking iron supplement tables**
  - **Taking plenty of fruit juice and water regularly.**
20. In which one way are air sacs (alveoli) able to carry out gaseous exchange?
  - **They are thin walled to allow gases to diffuse through easily**
  - **They are moist encouraging gas molecules to dissolve**
  - **They are many in number which increases the surface area for gaseous exchange**
  - **They are surrounded by a network of blood capillaries which supply them with blood**



21. Why is it more difficult to push a wheelbarrow uphill than downhill?
- **There is less gravity to support movement of a wheel barrow uphill than down hill**
22. Apart from making alcohol, state any **one** other way in which distillation is useful to people.
- **Distilled water is used to mix drugs and drips**
  - **Distillation is used to separate different petroleum products.**
  - **Helps to obtain pure water.**
23. State any **one** factor to consider before sorting clothes for washing.
- **Colour of the cloth**
  - **Level of dirt**
  - **Texture of the cloth**
24. How does a candle manufacturer benefit from bee keeping?
- **Gets wax from honey bees used for making wax candles**
25. Apart from preventing teenage pregnancy, give **one** other reason why school girls are advised to abstain from sex.
- **To prevent sexually transmitted diseases**
26. State the importance of moulting to an insect.
- **Promotes growth // Enables an insect to grow // Increase an insect in size**
27. What is the function of the cortex in the kidney?
- **It is where filtration of blood takes place**
28. How does buoyancy(upthrust) force affect the weight of objects in water?
- **The weight of objects reduce / upthrust force makes objects weigh less when in water**
  - **It weighs less**  
*(reject : Their density reduces/ become less dense)*
29. How is a chameleon important to human beings?
- **It eats harmful insects to man**
30. Give any **one** breed of goats kept for milk production.
- **Toggenburg goats**
  - **Anglo-Nubian goats**
  - **Saanen goats**
  - **Alpine goat**

The diagram below shows a condition during the flow of electricity along electric wires. Study and use it to answer questions **31** and **32**.



31. Identify the electrical condition shown above.
- **Short circuit**
32. Write any **one** cause of the above condition during flow of electric current
- **Poor wiring when installing electricity in buildings**
  - **Pushing metallic objects in electric sockets**
  - **When bare electric wires carrying current get into contact**
  - **Fault in electrical appliances**
  - **Wrong connection of wires in electric appliances**
  - **Overloading electric sockets**
33. Why is it not advisable to stop petrol fire using water?
- **Petrol floats on water and continues burning**
  - **Petrol spreads fire to other places**
34. State any **one** way in which colostrum is important to a newly born calf.
- **Colostrums opens the digestive system of a newly born calf**
  - **Colostrums boosts the immunity of a calf**
  - **It provides a calf with a balanced diet**
  - **It improves the calf's sight since it is rich in vitamin A**
35. What would you do to the garden where planted seeds failed to germinate?
- **Carry out gap filling**
36. Why does a clay-made charcoal stove use less charcoal than a metallic one?
- **A clay-made charcoal stove absorbs and retains more heat for a longer time than a metallic one**

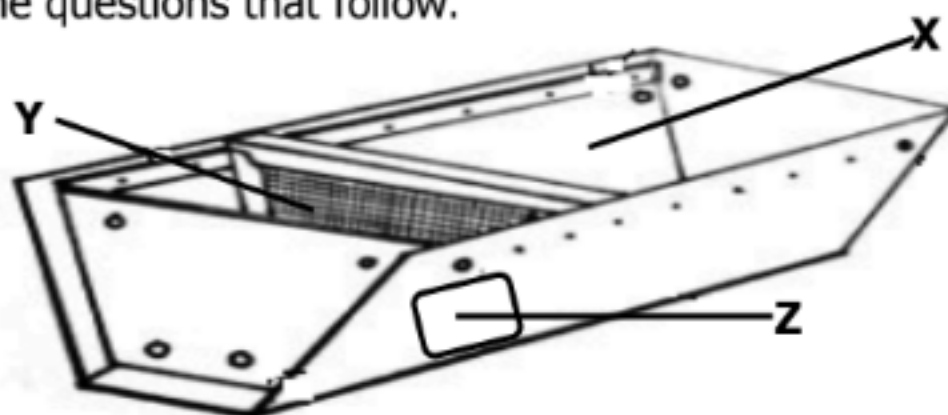
37. State any **one** habit that helps to promote oral health.
- **Rinsing the mouth**
  - **Dental flossing**
  - **Brushing teeth daily**
  - **Visiting the dentist for checkup**
38. What is the importance of a chimney on a kitchen?
- **To let out smoke from the kitchen**
39. State any **one** reason why clay soil is used for making ceramics.
- **It has fine smooth particles.**
  - **It has sticky particles.**
40. In which part of a lens camera are images formed?
- **Film.**

### **SECTION B: 60 MARKS**

Questions **41** to **55** carry four marks each.

41. (a) Name the part on a house that performs the following functions,
- (i) Lets fresh air into the house **Doors /windows**
  - (ii) Lets warm air out of the house **ventilators**
- (b) By what process does heat travel through a saucepan placed on a gas cooker?
- **Conduction**
- (c) State any **one** way in which insulators of heat are useful to people.
- **They are used to hold hot objects to prevent burns**
  - **Sweaters provide warmth to our bodies**
  - **Gloves and tongs help blacksmiths to hold pieces of hot iron**
  - **Insulators like wood and plastics are used on handles of cloth irons and frying pans**

42. The diagram below shows a type of bee hive. Study and use it to answer the questions that follow.



- (a) Name the parts marked **X** and **Z**.
- X** **honey chamber**
  - Z** **entrance/entry**
- (b) State any **one** function of the part marked **Y** on the beehive above
- Prevents the queen bee from laying eggs in the honey chamber**
  - Prevents the queen bee from eating honey**
  - Separates the honey chamber from the broad chamber**
- (c) Identify the type of beehive shown above.
- Modern bee hive (Reject: Top bar hive)**
43. The table below shows parts of a flush toilet with their functions in the wrong order.

Part	Function of part
Toilet seat	Stores faeces and urine
Bowl	Stores water for flushing the toilet
Cistern tank	For the user to sit on when defecating
Septic tank	For depositing faeces and urine

Match the parts to their function by re-writing the correct order.

- |                 |   |
|-----------------|---|
| a) Toilet seat  | <b>For the user to sit on when defecating</b> |
| b) Bowl         | <b>For depositing faeces and urine</b>        |
| c) Cistern tank | <b>Stores water for flushing the toilet</b>   |
| d) Septic tank  | <b>Stores faeces and urine</b>                |



44. A Primary Five pupil mixed sugar with water and stirred.
- (a) State what happened to sugar.  
• **Sugar dissolved.**
- (b) Why did sugar behave as stated in (a) above?  
• **Sugar is soluble in water**
- (d) Identify the name given to the following substances in the above experiment.
- |      |       |                |
|------|-------|----------------|
| (i)  | Sugar | <b>solute</b>  |
| (ii) | Water | <b>solvent</b> |

45. (a) Name any **two** examples of wedges.
- |                      |                |
|----------------------|----------------|
| • <b>Razor blade</b> | • <b>Tenon</b> |
| • <b>Panga</b>       | • <b>Hoe</b>   |
| • <b>Knife</b>       | • <b>axe</b>   |
| • <b>Safety pin</b>  |                |
- (b) Give any **two** ways in which a crop farmer uses wedges.
- **For digging using a hoe**
  - **For cutting trees using a panga and an axe**
  - **For harvesting crops using a panga and sickle**
  - **For slashing bushes/grass using a slashing tool**

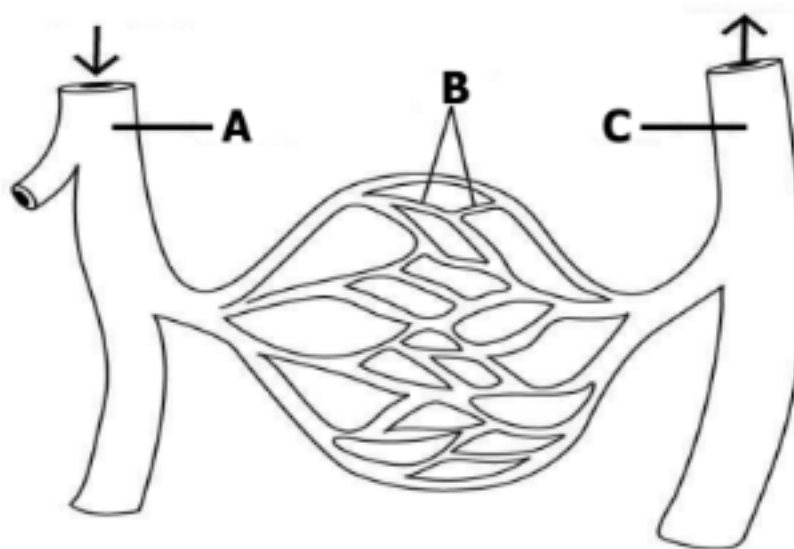
46. The list below food stuffs that belong to different classes of food. Use it to answer the questions that follow.

**Orange, Honey, Iodised salt, cassava**

- (a) In which class of food does iodised salt belong?  
• **Mineral salts**
- (b) Name any **one** class of food which is not represented in the above list.
- **Proteins**
  - **Roughages**
- (c) Identify any **one** foodstuff you would advise a brick maker to eat.
- **Honey**
  - **Cassava**
- (Reject other foodstuffs which are rich in carbohydrates because they are not indicated on the list)*

- (d) How are oranges useful to human health?
- **Source of Vitamin C which prevents scurvy.**
  - **They keep the body healthy.**

47. The diagram below shows **blood vessels in the human circulatory system**. Study and use it to answer the questions that follow.



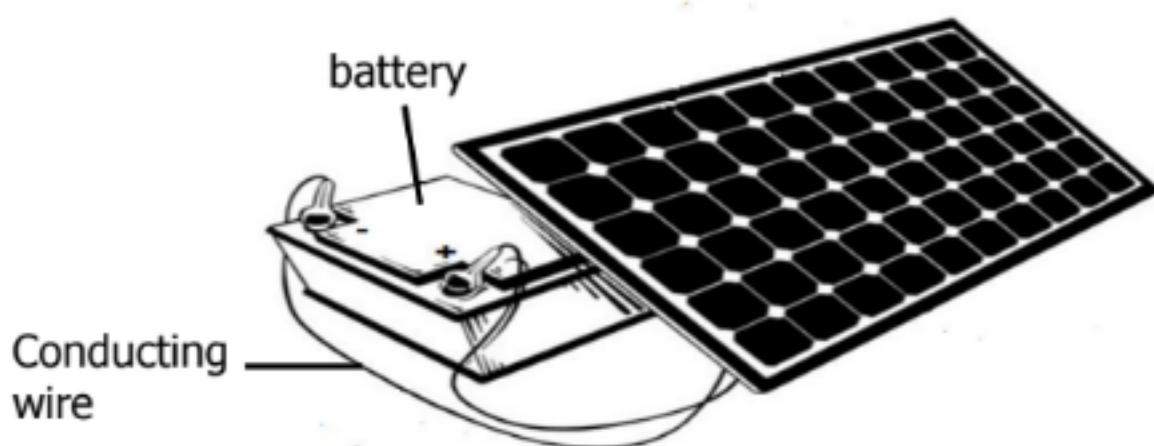
- (a) Name the blood vessels marked **A** and **B**.
- A **artery**
  - B **blood capillaries**
- (b) State any **one** structural difference between blood vessel **A** and blood vessel **C**.
- **Blood vessel A has no valves while blood vessel C has valves.**
  - **Blood vessel A has thick walls while blood vessel C has thin walls.**
  - **Blood vessel A has narrow lumen while blood vessel C has wide lumen.**
- (c) Give any **one** function of blood vessel **B** during blood circulation.
- **Join veins to arteries.**
  - **Help in exchange of materials in the body.**

48. (a) What germ causes gonorrhea in human beings?  
• **Bacteria / Neisseria gonorrhoeae.**
- (b) Give any **two** signs of gonorrhea.  
• **Discharge of pus from the vagina or penis.**  
• **Blockage of the oviduct.**  
• **Blindness in newly born babies.**  
• **Rash and sores on genital areas.**  
• **Pus comes out of the baby's eyes.**  
• **Red and swollen eyes.**
- (c) State any **one** way of preventing gonorrhea in human beings.  
• **Being faithful to one's marriage partner.**  
• **Abstaining from sex.**  
• **Using condoms correctly during sexual intercourse.**  
• **Treating infected people using antibiotics.**
49. (a) Give any **two** ways in which drug dependence can affect an individual.  
• **Leads to poverty.**  
• **Leads to family neglect.**  
• **Leads to child abuse and spouse abuse.**  
• **Leads to loss of family labour**
- (d) State **two** ways in which an individual can avoid drug dependence.  
• **Keeping busy with sports and games in free time**  
• **Avoid peer groups which exercise the use of common drugs**  
• **Engage in good social clubs**  
• **Desist adverts that praise drugs such as alcohol**  
• **Follow messages from guidance and counseling**  
• **Spend leisure time wisely**  
• **Follow the life skills in avoiding drug dependence**

50. (a) Mention any **two** chemicals used to treat water.
- **Chlorine**
  - **Iodine**
  - **Calcium chloride**
  - **Fluorine**
  - **Potassium permanganate.**
  - **Water guard**
  - **Aluminium silicate.**
- (b) Apart from using chemicals, state any **one** other method used to make water safe for drinking.
- **Boiling water**
  - **Using water dispensers**  
**(reject chlorination)**
- (c) Why is water obtained by filtration not good for drinking?
- **Filtered water still contains germs**
  - **Filtered water has germs in it**
  - **Filtration does not kill germs in water**
51. (a) Apart from compost manure, mention any **two** other examples of natural fertilizers.
- **Green manure**
  - **Farmyard manure**
  - **Organic mulches**
- (b) Why should water be sprinkled on a compost pit or heap?
- **To speed up rotting**
  - **To speed up the rate of decomposition**
- (c) State any **one** advantage of using natural fertilizers over artificial fertilizers.
- **Natural fertilizers are friendlier to the environment than artificial ones**
  - **Natural fertilizers stay longer in the soil than artificial ones**
  - **Natural fertilizers do not kill soil organisms while artificial fertilizers kill soil organisms**
  - **Natural fertilizers do not pollute the soil while artificial fertilizers pollute the soil when over used**  
**(reject answers without comparisons)**



52. The diagram below shows a device used in the production of electricity. Study carefully and use it to answer the questions that follow.



- (a) Identify the device shown in the diagram above.
- **Solar panel**
- (b) Give any **one** reason why the above device is usually,
- (i) placed on top of a house roof.
- **To expose them to sunlight so as to increase the production of electricity**
- (ii) painted black on the surface.
- **In order to absorb sun light**
- (c) Name any **one** electrical appliance that uses electricity produced by the above device.
- **Solar heaters**
  - **Solar water pumps**
  - **Solar dryers**
- (reject answers without the word "solar")
53. (a) Give any **one** reason why a passion fruit plant climbs others.
- **To get sunlight**
  - **To get extra support**
- (b) Apart from a passion fruit plant, name any **one** other plant that climbs others.
- |                              |                             |
|------------------------------|-----------------------------|
| • <b>Cucumber</b>            | • <b>Rose plants</b>        |
| • <b>Morning glory plant</b> | • <b>Rasp plants</b>        |
| • <b>Tomato plant</b>        | • <b>Water melon plants</b> |
| • <b>Pumpkin plant</b>       | • <b>Some bean species</b>  |
| • <b>Cow pea plant</b>       |                             |
| • <b>White yam plants</b>    |                             |

- (b) State any **two** ways how plants with weak stems climbs others.
- **By twining**
  - **Clasping**
  - **Using tendrils**
  - **Using hooks**
- (reject twinning/tendrill/hook method)**

54. The table below shows groups of birds, type of food eaten and nature of their beaks. Study and complete it correctly.

Group	Type of food	Nature of beak
Climbing birds	<b>insects/worms</b>	Strong pointed and chisel shaped beak.
<b>Birds of prey/ preying birds</b> <i>(reject prey birds)</i>	Flesh	Strong sharp hooked beak
Wading birds	<b>fish/frogs/worms/ tadpoles</b>	Long thin beak
Swimming birds	Fries, toads, frogs	<b>spoon shaped beak</b>

55. (a) Name the fungus used in the following,

- (i) brewing of alcohol  
**Yeast**
- (ii) making of antibiotics  
**Penicillium moulds**

- (b) State any **two** ways in which fungi are harmful to people.
- **Some fungi are poisonous to people**
  - **Some fungi cause food poisoning**
  - **Some fungi cause diseases to people**
  - **Some fungi make food to go bad**



