

Practice Worksheet — Grade 5 Science

Free practice worksheet from Enzyme. Show your work in the space provided. Stuck on any of these? Every Enzyme tutor starts with a free 20-minute call and a free diagnostic set — enzyme.ink/tutors

Body systems

1. Muscles at a joint such as the elbow work in pairs. Why is a second muscle needed to straighten the arm after the first one has bent it?
 - a) a single muscle would get tired too quickly to be used all day
 - b) a muscle can only pull, so another is needed to pull the bone back
 - c) one muscle pushes the bone while the other pulls it at the same moment
 - d) a bone cannot move unless two muscles are touching it
2. What is the main job of the digestive system?
 - a) sending messages between the brain and the rest of the body
 - b) breaking food down so the body can absorb nutrients
 - c) pumping blood around the body so every part gets oxygen
 - d) taking oxygen out of the air and passing it to the blood
3. Which organ pumps blood around the body?
 - a) the stomach
 - b) the brain
 - c) the lungs
 - d) the heart

Criteria and constraints

4. A team's written criteria say their quiz app must be usable by a student who cannot see the screen. Which design change best meets that criterion?
 - a) make the screen redraw itself more quickly
 - b) use larger, brighter colours for the answer buttons
 - c) add a picture beside every answer choice
 - d) have the app read each question and answer choice aloud
5. A model rover must have a total mass no greater than 500 g. A team builds one with a 220 g frame, 95 g of wheels and a 140 g base. By how many grams is the rover under the limit?

Answer: _____ (g)
6. Before designing a product, why is it important to know who will use it?
 - a) it is not important at all to the design
 - b) it automatically makes the product cheaper to build
 - c) different users have different needs the design must meet
 - d) users always want exactly the same thing

Fair tests and repeats

7. A student is testing whether a new plant food helps bean seedlings grow taller. Why should she also grow some seedlings with no plant food at all?
- a) they guarantee in advance that the plant food will turn out to work
 - b) they show what the seedlings do without the plant food, for comparison
 - c) they make the whole investigation finish in noticeably fewer days
 - d) they remove the need to repeat the test more than a single time
8. In a fair test, how many things should you change at a time?
- a) none
 - b) one
 - c) as many as possible
 - d) two
9. Why do scientists repeat measurements several times?
- a) to make the experiment take longer, since longer tests are more convincing
 - b) because the first result of any measurement is always wrong by definition
 - c) to reduce the effect of mistakes and check the result is consistent
 - d) to use up the extra materials that were prepared before the test began

Floating lift and energy

10. Two blocks are exactly the same size. Block A has a mass of 40 g and Block B has a mass of 120 g. Placed in a tank of water, Block A floats and Block B sinks. What does this show?
- a) size on its own decides whether an object floats
 - b) for the same space taken up, less mass makes it more likely to float
 - c) water pushes upward harder on heavier objects than on lighter ones
 - d) heavier objects always float better than lighter ones
11. Why does a large steel ship float when a small steel nail sinks?
- a) steel ships are made of lighter steel
 - b) the sea is denser than a nail
 - c) the ship's shape pushes aside a lot of water
 - d) the ship is pushed up by the wind
12. What is the upward force that water exerts on an object placed in it?
- a) gravity
 - b) buoyancy
 - c) magnetism
 - d) friction

Observing the night sky

13. The constellation Orion is easy to spot in Alberta's evening sky in January, but it cannot be seen in the evening in July. Why?
- a) Orion moves off to a different galaxy during the summer
 - b) clouds cover that part of the sky every night in July
 - c) in July Orion sits in the daytime sky, so the Sun's glare hides it
 - d) Orion is much further from Earth in July than in January
14. Why do stars appear to move across the sky during the night?
- a) the Moon pushes them along
 - b) Earth is rotating, which changes our view
 - c) the stars are orbiting Earth
 - d) the stars are flying through space quickly
15. What is a constellation?
- a) a very large planet
 - b) a cloud of gas near Earth
 - c) a pattern of stars that people have named
 - d) a group of stars that are close together in space

Particle model

16. Juice poured from a tall glass into a wide bowl takes the shape of the bowl, but the amount of juice does not change. How does the particle model explain this?
- a) the particles stay close together but can slide past one another
 - b) the particles change into a different substance as the juice is poured
 - c) the particles spread apart to fill the whole bowl, leaving gaps between them
 - d) the particles lock into a fixed pattern shaped like the bowl
17. A student has two identical sealed jars, each with a capacity of 500 mL. The first jar holds 200 mL of water. The second holds nothing but air. What volume of the second jar does the air take up, in millilitres?

Answer: _____ (mL)

18. According to the particle model of matter, which statements are true? Select all that apply.
- a) the particles themselves change size when heated
 - b) all matter is made of tiny particles
 - c) the particles are always moving
 - d) there is space between the particles

Weather climate farming

19. Many Alberta farmers plant rows of trees, called shelterbelts, along the edges of their fields.

How does this help the farm?

- a) the trees keep rain from ever reaching the field, which stops flooding
- b) the trees supply the crops with all the water they need through the summer
- c) the trees slow the wind, so less topsoil blows away and more snow stays on the field
- d) the trees cool the soil so the crop ripens later in the autumn

20. What is the difference between weather and climate?

- a) weather is what happens day to day, climate is the pattern over many years
- b) weather is the pattern over many years and climate is what happens day to day
- c) climate describes only temperature, while weather covers everything else
- d) they mean exactly the same thing, but climate is the more scientific word