Progressive Achievement Tests in Science

Sample Questions

Australian Council *for* Educational Research

ACER

2. Caterpillar: Very easy – Year 3 students

3 **A caterpillar becomes**

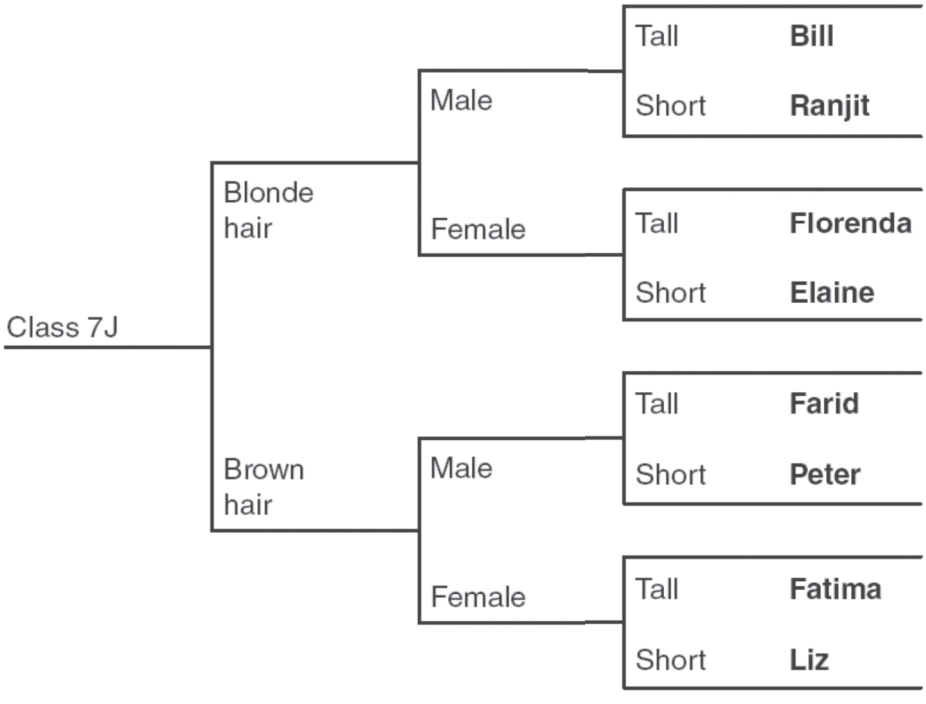

a butterfly
A


a grasshopper
B


an ant
C


a fly
D

3. Dichotomous key: Students in Years 4/5



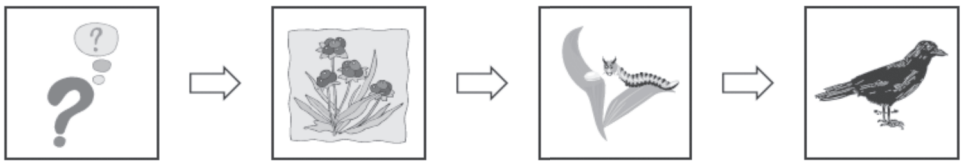
29 **In class 7J the short girl with blonde hair is**

A Florenda.
B Fatima.
C Elaine.
D Liz.

4. Food chain: Year 6 students

A food chain is a simple way of showing a food relationship between organisms.

20 **What is missing in this food chain?**



A The Sun
B A chicken
C Seeds
D A cat

5. Coastal rock strata: Year 8 students

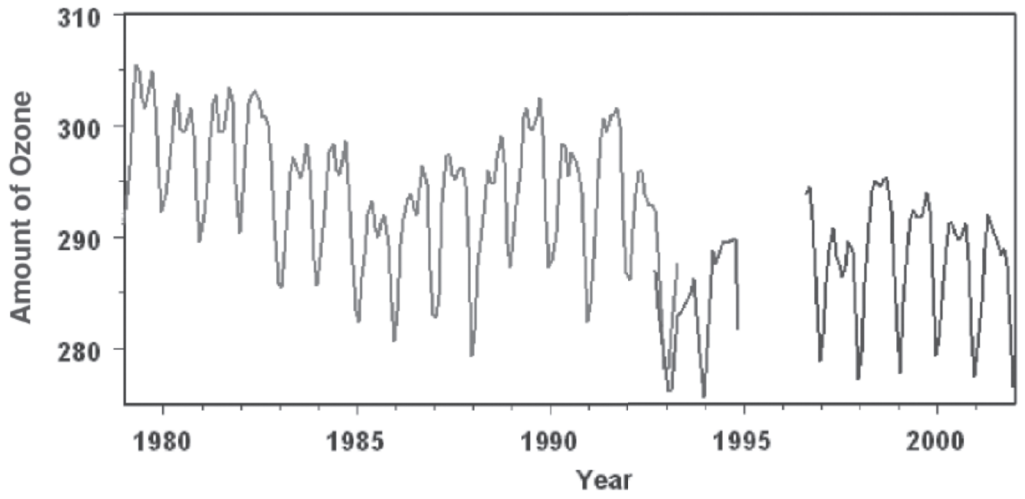
Coastal rock stacks

These are giant rock stacks just off shore. Geologists say that they are the remnants of limestone cliffs that have eroded over 10 million years ago.

9 **The geologists are making**

A a generalisation.
B a guess.
C an inference.
D an observation.

6. Ozone: Students in Years 8/9



This graph shows the amount of ozone in the Earth's upper atmosphere. Ozone absorbs 99% of damaging UV radiation from the Sun.

28 **What does the graph tell us?**

A The graph goes up and down but really there is no change overall.
B There is not enough information to draw any conclusions from this graph.
C The amount of ozone in the upper atmosphere has been increasing since 1993.
D Between 1980 and 2002 there has been a decrease in upper atmosphere ozone.

7. Food labels: Year 9 students – difficult

The wheat germ in a shop is in a sealed plastic container.
The oxygen absorber is in a small packet inside.

11 **Oxygen changes wheat germ by**

A breaking it up.
B mixing with it.
C soaking up water.
D reacting with it.

12 **To keep the food fresh, the packaging system must**

A keep oxygen outside the small packet.
B keep oxygen inside the container.
C remove all oxygen before the container is sealed.
D allow oxygen to move into the small packet.

8. Rusting iron: Year 10 students

Gerry investigated the rusting of an iron nail. He placed an iron nail in each of four test tubes as follows.

Test tube 1: iron nail only
Test tube 2: iron nail and tap water
Test tube 3: iron nail and salt water
Test tube 4: iron nail in recently boiled water with a thin layer of oil added
[Note: boiling water removes dissolved oxygen]

After ten days he makes the following observations:

Test tube	No rust	Some rust	A lot of rust
1	✔		
2		✔	
3			✔
4	✔		

19 **What substances are needed for iron to rust?**

A Oxygen and water
B Salt and oxygen
C Water and salt
D Oxygen, water and salt