Living things and life cycles: talk, sort and grow

Names: Class: Date:

Work in your group of three. Talk about each question before you write anything, and use your talk rules.

Our talk rules

1. **Everyone shares what they think.**
2. **We give reasons: ‘I think … because …’.**
3. **We ask each other: ‘Why do you think that?’**
4. **We listen to every idea and think about it.**
5. **We try to agree before we choose.**

PART 1 Living, once living or non-living?

Find these things around your school. Talk about each one and agree on its group: living, once living or non-living. Then write your reason. The four questions help: does it grow, make young or seeds, need food and water, and react to things around it?

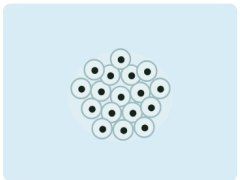
Thing	Living, once living or non-living?	Our reason
a pot plant		
an earthworm		
a pencil		
a cotton T-shirt		
a paper bag		
a steel paperclip		
a stone		
a glass of water		

PART 2 Put a frog’s life cycle in order

The five pictures are mixed up. Talk about them, then write 1 under the stage that comes first, then 2, 3, 4 and 5.



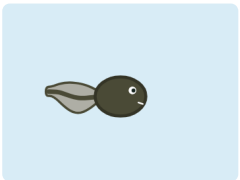
Froglet ☐



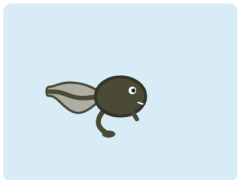
Eggs ☐



Frog ☐



Tadpole ☐



Tadpole with legs ☐

1. Which stage has gills and a tail, and lives in water?

2. Which stage has lungs and four legs, and catches small animals to eat?

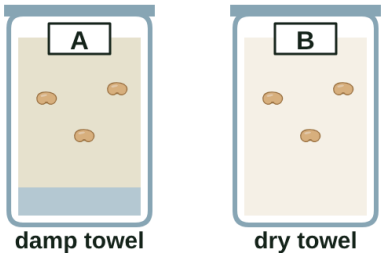
Answers (turn the page round). Part 1. a pot plant: living: it grows, makes new plants, needs water and light, and grows towards the light; an earthworm: living: it grows, has young, eats and reacts; a pencil: once living: its wood grew as part of a tree (the grey middle was never alive); a cotton T-shirt: once living: cotton grows on a cotton plant; a paper bag: once living: paper is made from wood; a steel paperclip: non-living: steel is made from iron, which comes from rocks; a stone: non-living; a glass of water: non-living. **Part 2.** 1 eggs, 2 tadpole, 3 tadpole with legs, 4 froglet, 5 frog. Question 1: the tadpole. Question 2: the frog.

PART 3 Does a bean seed need water to start growing?

Aim: To find out whether a bean seed needs water to start growing, by keeping one jar damp and one jar dry.

Each group needs: 6 bean seeds from a packet that says they are untreated; 2 clear jars or plastic cups; paper towel; water; 2 labels.

> **Safety.** Wash your hands after handling the seeds, and don't eat them. Wipe up spilt water so that no one slips. Use plastic cups if glass jars could get broken.



1. Line each jar with paper towel. Push 3 seeds down between the towel and the side of the jar, where you can see them.
2. Label the jars A and B. Wet the towel in jar A and pour off the extra water. Keep jar B dry.
3. Put both jars in the same warm place (above about 15 °C), with the same light. Only the water is different.
4. Look at the seeds every school day for two weeks. Keep jar A's towel damp but not soaking. Write or draw what you see in the table.

Day	Jar A: damp towel	Jar B: dry towel
Day 1		
Day 3		
Day 5		
Day 7		
Day 10		
Day 14		

1. Which seeds started to grow? What grew out of them first?

2. What did you keep the same in both jars? Why did that matter?

3. What does a seed need to start growing? Are the seeds in jar B alive?

PART 4 Bean diary

Plant a seed from jar A in a pot of soil and water it. Each week, draw your bean plant, measure how tall it is, and name its stage: seed, seedling, young plant, flowers or pods.

Week 1

Height: cm

Stage:

Week 2

Height: cm

Stage:

Week 3

Height: cm

Stage:

Week 4

Height: cm

Stage: