



Life Cycles and Fortune Graphs



Learning Intention

- Learn the main stages of the life cycle of the Toad.

National Curriculum Skills

Science Communicate clearly by speech, writing, drawings, diagrams, charts, tables, bar charts, line graphs, videos and ICT packages using relevant scientific vocabulary.

The environmental factors that affect what grows and lives in those 2 environments.

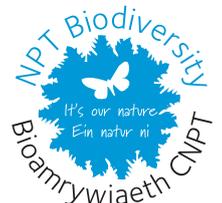
Maths Collect, represent and interpret data.

Activity Outline

- * Review the life cycle of the Toad - looking at pictures and discussing what the children already know.
- * Understand the visual nature of a line graph.

Resources

Copies of the Blank Fortune Graph and Statements for each group



Life Cycles and Fortune Graphs

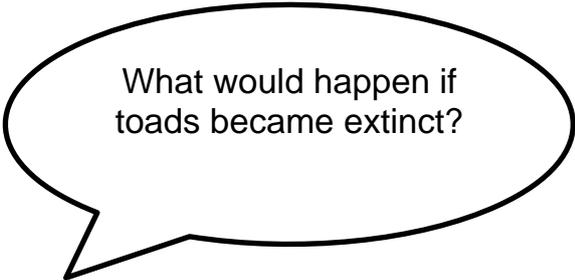
Lesson Outline

- Enlarge the graph to A3 and give a copy to each group along with the statement cards.
- Explain that the groups should first attempt to order the statements, to tell the story of the life cycle of the Toad.
- They should consider which statements are 'less fortunate' or negative statements.
- Once the groups have decided on the order, they should number the statements.
- They can then agree on where they should draw a cross on the appropriately numbered line on the graph.
- The groups can then join the points and discuss. Asking one group to feedback their ideas and what they are thinking about helps keep the other groups focussed.
- It is important to discuss the children's thinking as well as the content of the lesson.
- You could discuss the perspectives that other animals would have in the activity, for example - ask the pupils to draw on the fortune line of a Heron in an different colour. They might find that when the Toad is a tadpole, the Heron's fortune is higher!

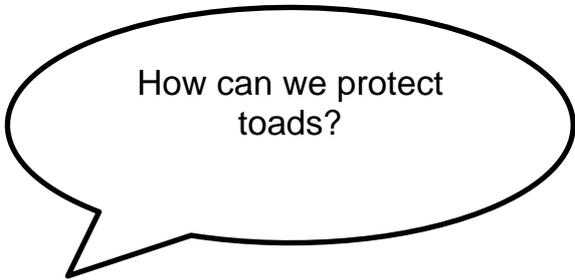
Possible Extension Activities

Ask groups to write more fortune statements for the Toad.

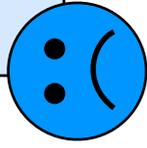
Groups could use the example statements to create a board game based on snakes and ladders - fortunate statements hop forward 3 squares, unfortunate go down the ladder!



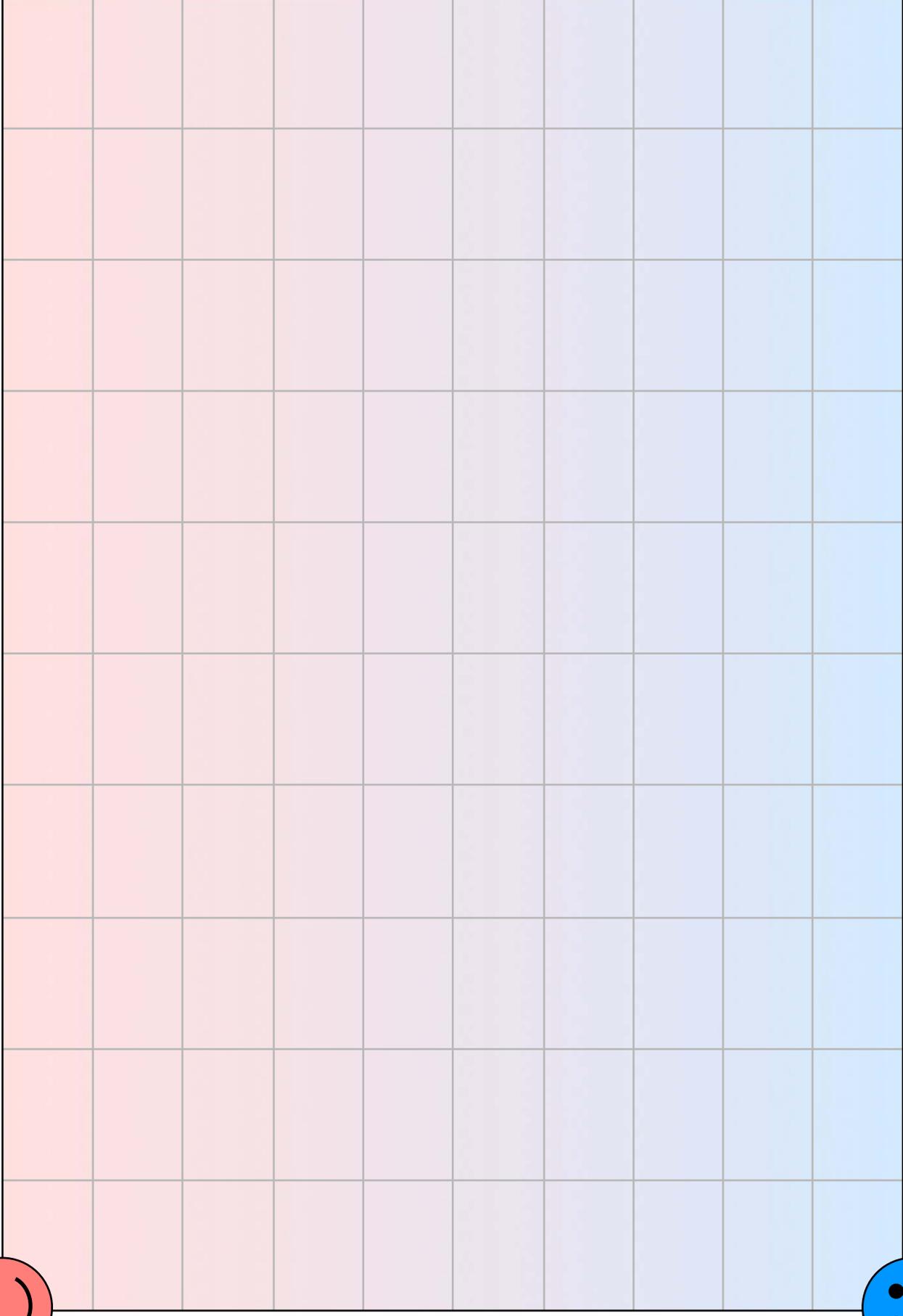
What would happen if toads became extinct?



How can we protect toads?



Fortune



1 2 3 4 5 6 7 8 9 10

Time

Statements

<p>You are one egg in a string of hundreds. Some hungry fish are hanging around.</p>	<p>You grow legs, lose your tail and crawl out of the water.</p>
<p>You hatch safely into a tadpole.</p>	<p>As winter turns to spring the midges are beginning to hatch. You're looking forward to a huge meal.</p>
<p>The sun has caused algae to grow in the pond. You have plenty of fresh, slimy green algae to eat.</p>	<p>Your singing helps you find a mate. You lay and fertilize 350 eggs.</p>
<p>A big heron flies over. Freeze (if you move it might eat you)</p>	<p>Finally 75 of your eggs survive and hatch into tadpoles.</p>
<p>The weather changes and it gets too hot and dry for you to eat. You lose weight.</p>	<p>It's early spring and you are returning to the pond to breed.</p>

Toad Game - example statements (use these or think of some of your own)

If you land on one of the following squares, follow the instructions given before the next player throws the dice.

1. You are one egg in a string of hundreds. Some hungry fish are hanging around. Don't wriggle in your see-through egg and maybe they won't eat you.
3. It freezes at night and some of the eggs are exposed and do not survive. Hop back one space.
4. You hatch safely into a tadpole. Move ahead two more spaces.
6. The sun has caused algae to grow in the pond. You have plenty of fresh, slimy green algae to eat. Move ahead one space.
8. You are feeding happily when a Great Diving Beetle appears and chases you. Go back one place to hide.
10. You grow legs, lose your tail and crawl out of the water. Hop ahead two more spaces.
11. A big heron flies over. Freeze (if you move it might eat you) and miss a turn.
13. The weather changes and it gets too hot and dry for you to eat. You lose weight. Hop back one space.
14. The weather pattern changes again. Heavy rains put more water in your pond. Hop ahead one space.
16. Heavy rains wash oil into the pond. It kills some other toads who do not escape in time. Hop ahead one space.
19. It starts to get very cold. Burrow into the leaf litter and have a long sleep. Miss one turn as you are hibernating.
22. Winter turns to spring. As the temperature warms up, you begin to practice your croaking (croak 5 times before you take another turn).
23. The midges are beginning to hatch. You're looking forward to a huge meal. Hop ahead one space.
26. A pesticide truck sprays your pond to kill the midges. The spray burns your sensitive skin and leaves you without food. Hop back one space.
28. It's early spring and you are returning to the pond to breed. Migrating across the road, five of your friends are run over. You hop back two spaces to safety.
30. Suddenly a whole bunch of people arrive and safely carry you and other toads across the busy road (move on three spaces).

33. Your singing helps you find a mate. You lay and fertilize 350 eggs. Take a break and miss a turn.
35. Fish and diving beetles eat more than half of your eggs. Hop back one space.
37. The warm weather makes the mayflies hatch. You eat a dozen in just a few minutes. You're too full to move. Stop to digest them and miss a turn.
39. A group of local residents keep your pond from being drained for a housing development. Hop ahead one more space.
40. Finally 75 of your eggs survive and hatch into tadpoles. Hop ahead one more space.
42. A protected wetland filters out pollution before it washes into your pond. Hop ahead one space.
43. You dodge the beak of a hungry heron. Dive to the bottom to hide and miss a turn.
45. Thirty of your tadpoles escape being eaten by a fish someone released into the pond. Hop ahead one space.
46. Suddenly, a human hand grabs you from the water. After giving you a kiss, they gently place you in the water. Thank goodness their hands were wet and they didn't hurt your sensitive skin. Swim forwards 1 space and relax.
48. Twenty of your 350 eggs survive and grow legs and leave the water. Hop ahead one more space.
50. Congratulations! You've completed the life cycle!