

***The Knotty Tree Problem:***

***A workshop exploring how to navigate complex issues***

***and agree a fair outcome***

***An Interactive Climate Change Workshop***

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| **Learning Objectives:** Listening, Communicating, Building Empathy, Handling Complexity, Collaborating, Problem Solving | | |
| Year Group | KS2 Upper and KS3  60 mins |  |
| Introduction | To solve the issues of climate change we need to learn to balance conflicting interests and handle complexity. |  |
|  | **When animals fight...** | **Timing** |
| Stimulus | Show the [Starving Monkey 'GANGS' Battle in Thailand](about:blank) video | 2 mins  1 min |
| Guided Discussion | * What does the future look like for the monkeys in these videos? * In the human world where do we see these conflicts happening (e.g. ventilators and vaccines)?   Academics call tricky issues like these WICKED problems.   1. They are complicated and difficult (maybe impossible) to resolve 2. There are lots of different people needing and wanting different things 3. They are interconnected and if you solve one thing somewhere it can have a harmful impact elsewhere | 5 mins |
|  | **The Knotty Tree Problem** |  |
| Setting up the problem | An ancient fruit tree sits in the middle of a village. Half the village wants to chop it down and the other half wants to leave it.  Why? Get the class to speculate and create 4 interest groups (2 on each side).  Get them to consider:   * Financial gain (selling the wood) * Basic needs (housing, heat, cooking, food, shade) * Local ecology (animals relying on the tree for food and shelter) * The environment (keeping the air and water clean, the soil stable) |  |
| Competing interests | Split the class into 4 interest groups, e.g.  **Cut the tree down**  **Group 1**  Plans to sell the wood to make money  **Group 2**  Plans to use the wood to construct a building (a home, a school, a hotel)  **Leave the tree standing**  **Group 3**  People and animals who rely on the fruit and shelter of the tree  **Group 4**  Scientists concerned with global warming and protecting biodiversity | 3 mins |
| Making your case | Each interest group to come up with arguments to make their case and share them with the class | 3 mins |
| **What do we do?** | **How can we make everyone happy (or not too unhappy)- a FAIR outcome** |  |
| The negotiation | There is no perfect solution here BUT we still need to decide what happens to the tree. Can you:   1. Find different ways of doing things? 2. Work together? 3. Reduce the harm? |  |
| Question storm | Asking the right questions unlocks new ways of thinking about a problem. An easy way to come up with the ‘right’ questions is to practice. Try this (see Appendix) | 3 mins |
| **Plenary** |  |  |
| Class discussion/  homework | Research some real-world examples of WICKED problems |  |

Appendix

### **QUESTION-STORM**

This is a twist on a brainstorm. It takes between 1-3 mins to do – you can spend as long as you like discussing the results. Using basic question stems gets pupils comfortable and capable of generating volumes of simple questions. More complex stems can be introduced to deepen their thinking.

Intro:

* The task is to generate as many questions as possible, without judgement or editing
* Question stems, start with ‘Who’, ‘What’, ‘When’, ‘Where’, ‘How’ and ‘Why’
* You can either do 1 question stem at a time for 30 seconds, or remind them of all six and give them 3 minutes to generate as many questions as they can (use a giant egg timer for fun)
* Follow up with a second go using ‘What if...?’, ‘How could we...?’ ‘What would happen if...?’ ‘What if we found out that?’

Class instructions:

* Right, let’s do a question-storm
* The game is to write down as many questions as you can
* You have 1 minute to write down as many questions as you can – minimum 5 with each question stem
* The big egg timer will show you how long you’ve got
* There are no good or bad/right or wrong questions
* On your marks get set, go!

Each side collects their results:

* Each pupil pick your favourite and share with your group
* As a group pick your top 3 (show of hands)