**The RIDDLES Game**

DESCRIPTION

This is an activity about communication and working groups. It creates a paradoxical situation where participants must complete a team task that also contributes to the achievement of the whole group goal. But this is not necessarily evident to participants during the action – although they are told. Participants normally settle into achieving the team task and omit or ignore the whole group goal. The learning outcomes include the ease with which we can lose sight of the ‘big picture’ and the kinds of actions that will direct attention away from it.

### LEARNING OPPORTUNITIES

This activity is designed to create an environment where participants explore how to solve problems, find solutions and work together.

### AUDIENCE

“Riddles” was designed for high school students but has just as much relevance and engagement potential for adults of all ages.

### TIME

Allow about 45 minutes for play and debriefing. It may take longer – but you can control time to some extent by imposing time limits for action and emphasising the ‘need to finish fast’. See note in the Briefing section. This will generally influence teams to be more ruthless than they might otherwise feel inclined to be.

### GROUP SIZE

A minimum of 8 participants is needed. This is four teams of two members each. Any number to about 20 is feasible and it is not essential for teams to be evenly numbered.

### RESOURCES

Four envelopes with the riddle pieces arranged according to instructions. A white board or chart paper to record results and notes.

### SETTING

A room with a flat floor and moveable furniture that can be arranged in corners set as far apart as possible.

### BRIEFING

DO - Introduce the activity by locating it generally as a role-based simulation which focuses on problem solving, negotiation and team work. You don’t need to say more than that.

AVOID - Take care to avoid any reference to cooperation or collaboration – although you will read out a rule that implies this is essential. It is important for the setting and action to provide an environment within which assumptions are at work and operate in ways that can be explored during the debriefing. So do avoid saying anything other than specific instructions. If there are questions about the process suggest that they simply get stuck into the task as described and understanding will follow.

### PROCESS

Well before the action begins prepare the resources by placing the sets of riddle cards in envelopes according to the instructions

Arrange the whole group into four teams. Allocate them to places in the corners of the room so that teams are widely separated. This will enhance the sense of competition, and separateness.

Distribute the envelopes to the four teams with instructions not to open them until you say so.

Tell them as follows:

Each team has a set of cards in their unopened envelope. Each card has some information about a riddle. Each team’s task is to assemble all the clues for one riddle and then work out the answer to that riddle. There are no cards with answers on them. The task is complete when I have four sets of cards and the correct answers.

To assemble your set of cards will require negotiation using the follow rules:

* Spend a few minutes discussing your negotiation strategies
* Each team member must agree with the negotiating strategies of the whole team. You can spend as long as you wish deciding what these will be.
* When you are ready one, only person may leave your team at any one time to negotiate with any other team.
* Only one person may negotiate with another team at anyone time.
* However you may stay in the area and wait your turn to negotiate if you wish.
* Team members take turns to be a negotiator.
* There is no particular time limit, but I will advise if you are running short of time. OR – *if there is limited time set a time limit and vocally keep track of it*

### DEBRIEFING

The Observer Sheet provides a list of likely events to be watched for. One useful debriefing framework is to settle everyone into a circle so everyone can see everyone else and all are on the one level.

1. The first round of questions then focuses on statements of fact: what happened? Invite participants to describe their experience of the sequence of action. Ask what happened then? Why was that the response? Etc.
2. The second round of questions focus on emotions: how are you feeling now? What did [that action] lead you to feel about the person? What did you feel during the action? At different times? When you were a negotiator? Etc. What emotion led to that action/response? How are you feeling now that we are discussing the action?
   1. At some point when it seems most relevant – if it does not come up in the discussion – point out the information in the briefing that you read out – *The task is complete when I have four sets of cards and the correct answers.*
3. The third round of questions focuses on the real life parallels: where else in your work/social [etc.] life would you see [behaviours observed here]? What real life experiences come to mind as when discussing this simulation? How does the action here reflect possible options for behaviour in the real world? Etc.

This sequence moves participants from reporting and reflecting on ‘what happened’/ what they did, through to naming their own feelings and linking these to real life factors they have or feel they can anticipate encountering.

And in Sim 102 this will lead into discussion about how to make the benefits and complexities of simulation clear. It will emphasise the ways in which humans assume that separation implies competition.

**DIRECTIONS FOR MAKING RIDDLES ENVELOPE SETS**

Set out below are four riddles. Type each line of each riddle (including the letter and number) on a separate 8 cm x 13 cm card. The letter and number are included in order to facilitate random distribution of information across the four groups and to enable the facilitator to determine whether a given group has all the information it needs to solve its riddle. All cards labelled 'A' are placed in an envelope marked 'A', all 'B's' are placed in an envelope marked 'B', and so on. (The numbers are sequential but not consecutive.)

Riddle 1

|  |  |
| --- | --- |
| D 43 | Three missionaries and three cannibals come to a river and desire to cross. |
| C 50 | The boat will carry only two passengers. |
| A 57 | All the missionaries can row, but only one of the cannibals has been trained to do this. |
| D 64 | The trips must be arranged so that the cannibals will never outnumber the missionaries |
| A 71 | In other words, one missionary must never be in the company of two cannibals, or two missionaries with three cannibals |
| B 78 | They were able to get across. But how was it done? |

Riddle 2

|  |  |
| --- | --- |
| A 85 | Two workmen were repairing a roof. |
| D 92 | They fell through a large chimney and landed in a fireplace on the floor below. |
| C 99 | Both men were unhurt. |
| D 106 | They looked at each other, walked around the room, stretched their arms, and realised that they had sustained no injuries. |
| D 113 | Without speaking a word or discussing their sudden fall, both men started back to their job. |
| C 120 | It happened that one man's face was well smeared with soot from his passage through the chimney. |
| D 127 | The other man's face, however, was absolutely clean. |
| A 134 | Yet the man with the clean face went in and washed his face; the man with the dirty face went back to work without washing his face. |
| B 141 | Can you explain, logically, why they did this?. |

Riddle 3

|  |  |
| --- | --- |
| A 148 | When Jimmy went to buy a barrel of cider from Farmer Brown, the farmer had only about half a barrel of cider. |
| B 155 | Jimmy looked into the barrel and thought it was less than half full, while the farmer thought it was more than half full. |
| C 162 | They settled the matter quickly and accurately without using a measuring rod of any kind or putting anything into the barrel. |
| A 169 | How did they do it? |

Riddle 4

|  |  |
| --- | --- |
| B 176 | A man lived on the twelfth floor of an apartment building. |
| C 183 | Each day, when he came home from work, he took the elevator to the eighth floor, got out, and walked up to his apartment on the twelfth floor. |
| A 197 | The elevator was in good operating order and went all the way to the twelfth floor. |
| D 197 | Why did the man walk up those four flights of stairs? |

Envelope A has these cards

|  |  |
| --- | --- |
| A 57 | All the missionaries can row, but only one of the cannibals has been trained to do this. |
| A 71 | In other words, one missionary must never be in the company of two cannibals, or two missionaries with three cannibals |
| A 85 | Two workmen were repairing a roof. |
| A 134 | Yet the man with the clean face went in and washed his face; the man with the dirty face went back to work without washing his face. |
| A 148 | When Jimmy went to buy a barrel of cider from Farmer Brown, the farmer had only about half a barrel of cider. |
| A 169 | How did they do it? |
| A 197 | The elevator was in good operating order and went all the way to the twelfth floor. |

Envelope B has these cards

|  |  |
| --- | --- |
| B 78 | They were able to get across. But how was it done? |
| B 141 | Can you explain, logically, why they did this?. |
| B 155 | Jimmy looked into the barrel and thought it was less than half full, while the farmer thought it was more than half full. |
| B 176 | A man lived on the twelfth floor of an apartment building. |

Envelope C has these cards

|  |  |
| --- | --- |
| C 50 | The boat will carry only two passengers. |
| C 99 | Both men were unhurt. |
| C 120 | It happened that one man's face was well smeared with soot from his passage through the chimney. |
| C 162 | They settled the matter quickly and accurately without using a measuring rod of any kind or putting anything into the barrel. |
| C 183 | Each day, when he came home from work, he took the elevator to the eighth floor, got out, and walked up to his apartment on the twelfth floor. |

Envelope D has these cards

|  |  |
| --- | --- |
| D 43 | Three missionaries and three cannibals come to a river and desire to cross. |
| D 64 | The trips must be arranged so that the cannibals will never outnumber the missionaries |
| D 92 | They fell through a large chimney and landed in a fireplace on the floor below. |
| D 106 | They looked at each other, walked around the room, stretched their arms, and realised that they had sustained no injuries. |
| D 113 | Without speaking a word or discussing their sudden fall, both men started back to their job. |
| D 127 | The other man's face, however, was absolutely clean. |
| D 197 | Why did the man walk up those four flights of stairs? |

**RIDDLES OBSERVER SHEET**

Your task is to observe as much of the activity as you can, note interesting behaviours and enforce the rules. Points to look for include -

1. What effect does competitive behaviour have on decision making? Do participants -

a) blame negotiators for failure

b) make derogatory comments about other teams or team members

c) 'hide' pieces to prevent other teams obtaining all of riddle

d) forget to solve riddle

e) break any of these rules

(i) only one representative of a group may leave the group at any time

(ii) only one representative may negotiate with any group at one time

(iii) a group's representative must change after each transaction with another group is completed

(iv) a representation may not exchange (obtain or give) more than two clues during any transaction with another group

2. What methods of bargaining are employed and which are most effective?

3. When a non-cooperative stalemate is reached do participants:

a) question the rules

b) blame the exercise and/or

c) argue with the facilitator

4. Are there clear stages as the exercise progresses: e.g. polite - jovial - serious - conflict -stalemate - and so on?

5. What is the effect of groups starting with, and then requiring, different amounts of resources for successful problem solving?

6. If a group has a piece left over, what do they do with it: hide it, try to give it away?

7. Who leads the group? Does this leadership vary?

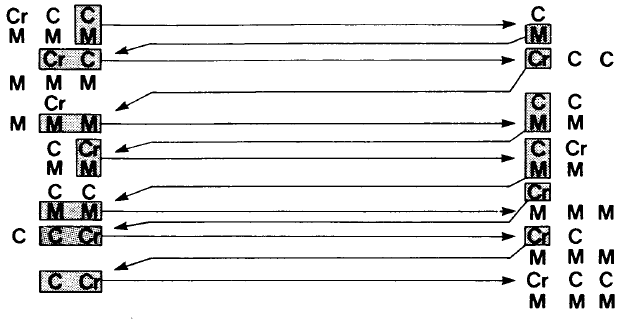
8. What do other members of the group do while their negotiator is away at another group?

**Riddle solutions**

The facilitator reads aloud each riddle and its correct solution. The solutions are as follows:

**Riddle 1**

It may be advisable to display this solution on a chart as follows:



NB – in the above Cr = Cannibal rower, C = Cannibal and M = missionary (all missionaries can row)

**Riddle 2**

Each man thought that his face looked like the other's.

**Riddle 3**

They tipped the barrel on the diagonal. If the liquid reached the lip and still covered the bottom, it was more than half-full; if the bottom of the barrel showed, it was less than half full.

**Riddle 4**

He was a midget and could not reach any button above '8' on the elevator panel.

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